# Virginia Wildlife

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# Virginia Wildlife

*Dedicated to the Conservation of Virginia's Wildlife and Related Natural Resources and to the Betterment of Outdoor Recreation in Virginia*

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**COVER:** "Summertime, and the livin' is easy." Food is plentiful now for this whitetail doe, but hunters must keep the numbers of her species within the carrying capacity of the range if she is to find adequate food through the winter. Photo by Leonard Lee Rue, III.

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EDITORIAL

# A Challenge and an Opportunity

ONE of the great challenges in America, besides the will to be free in a divided world, is recognition by man that he has a proper place in the natural environment. Only by understanding and appreciating the sanitary natural world around us can we hope to make a success of our lives on this planet. Only by knowing ourselves and the natural universe about us, of which we are an integral part, can we achieve the higher destiny ordered for mankind. Those who work in conservation and seek to evoke the personal ethic that guides the individual toward "man's noble harmony with nature" are indeed fortunate, for no work is more soul-satisfying.

Fifteen years ago almost to the day this editor elected to try to be of service in conservation to the people of Virginia. There was begun by the Commission a program of wildlife conservation education that was both a challenge and an opportunity. We carried through, or at least tried to carry through, much of what was believed to be wise and good. *Virginia Wildlife* was improved . . . expanded. Several national honors were received. The paid circulation rose to 40,000. Several quality booklets and numerous other educational materials were produced. Nine quality color motion pictures were produced. Over 50,000 wildlife and conservation photographs were added to the Commission's library. A wildlife museum was started. So was a Commission library of reference books. A modest but excellent field services program with schools, clubs and camps was started. Numerous exhibits, TV and radio programs were put on. A creditable news service was started. An annual essay contest in cooperation with the Virginia Division of the Izaak Walton League of America and the State Department of Education was begun. Furthermore, some reasonable coordination was started in conservation education through the organization and the work of the Virginia Resource-Use Education Council. In short, the Commission has achieved and is now enjoying a respected and sound conservation education program.

Now this is behind us. New challenges, fresh opportunities loom on the horizon. Yes, your editorial scribe is leaving Virginia to accept new conservation education responsibilities as director of the newly created Nature Centers Division of the National Audubon Society in New York. Here the opportunity to be of service to the entire country has us excited and glowing. We believe in the philosophy of nature centers and the idea of natural areas preservation; believe that city and suburban boys and girls—now totaling over 75 percent of our youthful population—must have a chance at more "grass roots," meaningful outdoor experiences in learning, or . . . conservation is lost. By giving them quality learning opportunities in carefully planned, competently directed outdoor nature and conservation centers, much can be done to create the interest and understandings of nature and ecology that necessarily precede the acceptance of conservation as a practice and a philosophy.

Leaving Virginia, the land of pleasant living and nice people, is never easy. Relinquishing the post of education division chief and the editorial helm of *Virginia Wildlife*, which we have guided over calm and troubled waters for nearly 15 years, also will be hard. So will be the "adieu" to our many wonderful friends and supporters. To them, all we can say is a sincere . . . "thanks"; without your help we could have done little.

But this is not good-by, for we will return to the Old Dominion and the other states where our new services may be needed. It is this call to greater conservation service that impels us—a calling that is a challenge and an opportunity as great as America itself. –J. J. S.

LETTERS

## Deer Plentiful Now

THE Commission has done a great job in restoring wildlife in Virginia. Twenty years ago it was very rare to even hear someone say they have seen a deer track in this part of the county; now we have as good hunting as has been in the "Brandon District" where I have a small farm. We now hunt our home place which is only seven miles from Petersburg as often as we do in Brandon on the James River where the deer have been plentiful for a number of years.

I would like also to say that we very often see the pheasants the Commission turned loose on Brandon in 1960.

*E. L. Cerny*
Petersburg, Virginia

## Successful Gobbler Hunter

YOU may be interested in the enclosed picture (of a turkey) which shows the results of my one-day trip to Camp A. P. Hill on the permit which you so graciously extended to me. I do not believe that this result could have been possible without the fine article in your April issue of VIRGINIA WILDLIFE which I literally memorized.

The turkey weighed 19 pounds, 4 ounces. His beard was 12 inches long. He was killed with a double-barrel shotgun at 25 yards using No. 4 magnum shells. After I had heard his gobble and had answered him with my caller (the kind described in your article) it took about five minutes for him to come strutting up to me. He was quite a sight. Your officials at A. P. Hill estimated his age at five years.

I have never hunted turkeys in the spring, but for real sport and true excitement I recommend it highly. I hope that the experiment this year will prove so beneficial as to cause you to open the season state-wide next year.

*Rev. Herbert A. Moyer*
Woodbridge, Virginia

## To Provide Recreation Area

ON my farm 6½ miles east of Marion on the South Holston River, I plan to develop an area of about two acres along the river. 100 feet in depth by about 1000 feet in length, suitable for chaperoned Scout groups, groups from Marion College, our local churches, and others to use for outdoor camping and picnicking. It will be arranged with picnic tables, outdoor cooking arrangements, and toilet facilities. They will be privileged to use this area from May to October at no charge at all.

I am sure you are interested in seeing projects of this kind promoted. It is my thought that there are many areas of this sort that can be developed to provide pleasant spots for clean recreation for our children as well as grown-ups.

*Gilbert C. Walker*
Marion, Virginia

# Use of Water for Recreational Purposes

By GRANT W. SHARPE

*Assistant Professor of Forestry, Department of Forestry,*
*School of Natural Resources*
*The University of Michigan, Ann Arbor, Michigan*

AMERICANS are on the move, taking in souvenirs and other people's scenery. I speak from experience. I have made several cross-country camping trips with my family. There are many stretches of road where camping facilities are non-existent or, if present, overcrowded. One of my children came up with a gem last summer when she asked, "Daddy, where's the next crampground?" It was a slip of the tongue, but certainly appropriate, because the next stop was in a national park, one of those scenic treasures that is being loved to death. These superlative areas were not established to be filled and overflowing with people. Overuse means overdevelopment, and too much development defeats the very purpose for which they were established. State parks are shouldering much of the recreational load, taking some of the pressure off the national parks, but state parks, too, are turning away hundreds of visitors daily because there is no more room or because their sanitation facilities have reached the saturation point.

Yet, our people demand recreation facilities. Where can they go? National forests comprise 10 times the area of national parks, and they are already government owned. They present an obvious outlet for future recreationists and through further development can alleviate the pressure on national and state parks.

Do you know that one-fourth of the land area of the United States is government owned? Most of it is in the West, and with the exception of California the greater concentration of the people is in the East. The answer lies in developing areas for intensive use close to home, and this for all practical purposes means water recreation projects. You may ask, "Do the people want water recreation?" I will give you the answer in a moment if there now is any doubt in your minds. First, let's look at the different forms of popular outdoor recreation today: camping, picnicking, hunting, motoring, fishing, water skiing, boating, swimming, and winter sports. The first four are enhanced if water is nearby; the last five are entirely dependent on water.

Water is something like fire. People for some mystic reason are drawn to water. Whatever the reason, we know being near water increases our enjoyment, particularly when the surrounding topography is pleasant or spectacular. Most of the recreational activity in the United States is associated in some manner with water as anyone in recreation development knows. Impounded water lends itself nicely for use by heavy concentrations of people. However, let me assure you that I am strongly opposed to the flooding of those areas which are outstanding in their present use as lands of unique scenic beauty, as wilderness areas or those with historic and archeological significance.

Water, then, figures critically in recreational planning, not only aesthetically, but for drinking and in sewage systems. In fact, the limiting factor in the carrying capacity of some outdoor recreation areas is not the size of the parking lot or number of campsites but the capacity of the sewage plant.

Corps of Engineers Photo

The increase in use of federal reservoirs has been greater than the increase in use of any other kind of recreational area.

Some of you are already concerned with recreation but not necessarily because you want to be. Even the forester and the engineer are becoming involved in recreation planning, not by choice, but because it is being forced on them by a demanding public. This same public expects anyone governing water areas to provide recreation facilities.

Recreational use of wildlands is increasing more rapidly than our population increase. In a recent 10-year period, 1948 to 1958, the population of the United States increased 10 percent. At the same time the sales of fishing licenses increased 38 percent. During this same period, sale of fishing tackle increased 77 percent, outboard motors in use increased 130 percent, and the number of boats increased 144 percent.

Paper Presented at the National Water Research Symposium, Sheraton Park Hotel, Washington, D. C., March 28-30, 1961.

Corps of Engineers Photo

A weekend parking jam at Philpott Reservoir. Recreational use of wildlands is increasing more rapidly than our population increase.

Let's look at the increase in use of recreation lands since World War II: national wildlife refuges, 12 percent; state parks, 10 percent; national forests, 10 percent; the national park system, 8 percent; municipal and county parks, 4 percent; and the one use that leads all the rest is the increased use of federal reservoirs, 20 percent.

Maybe you would like this in terms of money. In 1960, Americans are said to have spent $1.3 *billion* on swimming, $2.5 *billion* on boating, $2.6 *billion* on fishing. All three are water sports. How does this compare with other sports? Golf took in only $800 *million* during the same period. Television is a big industry today, but it takes in only $900 *million* each year.

Time doesn't permit treating individually each of these forms of water recreation. Let's take boating as an example

Corps of Engineers Photo

Almost 20 percent of the pleasure motorboats in America are used to tow water skiers. This trio was photographed on Philpott Reservoir.

because it is already said to be America's number one participation sport. First a few more statistics.

Boating has increased 10 percent each year for the last 11 years.

Americans are expected to spend five times as much on pleasure boating next year as they did 10 years ago.

Small craft boats in the United States total over eight million and 80 percent of these are powered by outboard motors. Boat trailers total nearly 1¾ million. Add to this 2½ million rowboats, canoes, dinghies, and other miscellaneous craft.

There are 4,000 marinas and boatyards and 1,150 yacht clubs in the United States, and boating is increasing so rapidly that there are 50 to 60 new marinas being added to this list each year.

Why the big interest in boating? One of the main reasons is already a familiar one, the *prestige* that comes with owning a boat. The boat has become the status symbol that the automobile was 20 or 30 years ago. If a family today can choose either a boat or a second car, quite often the boat and motor win out. I heard recently that last year in California there were more boats purchased than cars.

What does boating mean in terms of money? In 1960, $2.5 billion was spent on new and used boats, motors, and accessory equipment, safety equipment, launching, storage, repairs, and boat club memberships. According to Peter B. Andrews, consulting economist to *Sales Management Magazine*, pleasure boating is expected to become a 3-billion-a-year business before too long.

T.V.A. Photo

Inevitably, there will be conflicts between recreation, including swimming, and other water uses such as waterfowl habitat and water supply.

How do they use these boats? The R. A. Holman and Co., Inc., reports the following percentages:

| | |
|---|---|
| Fishing | 42.1% |
| Cruising | 28% |
| Water skiing | 19.6% |
| Hunting | 6.9% |
| Racing | 2.9% |
| Commercial | .3% |
| Rental | .2% |

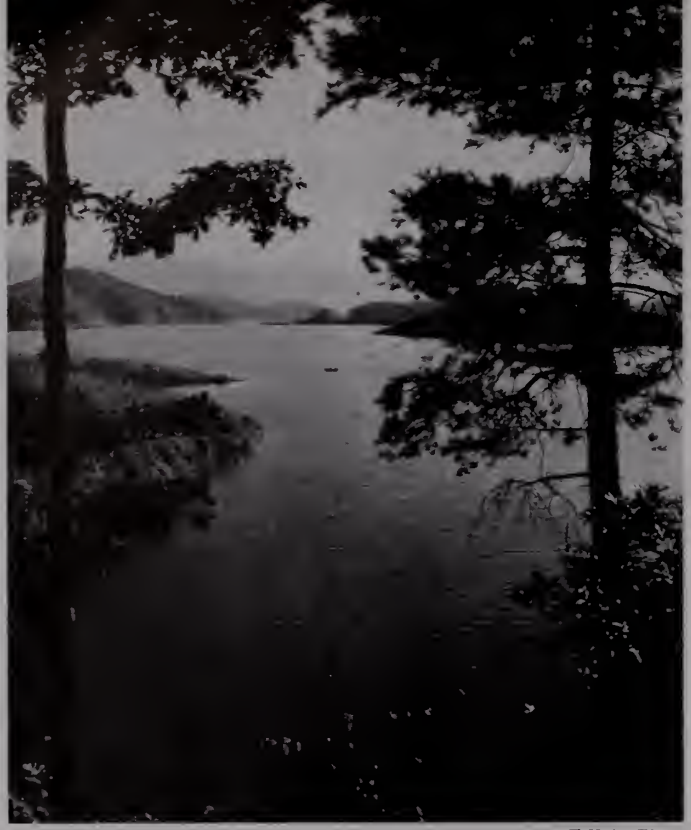
Notice, nearly 20 percent of all boats are purchased for water skiing. A few years ago most outboards were 10 hp. or less. Today, because of water skiing, about 50 percent of the outboards are 20 hp. or more. Water skiing, unheard of a few years back, is tremendously popular today. Water skiing brings us new water recreation problems. I need not tell you of the incompatibility between the fast-moving water skier and the slow-trolling fisherman, or the power boat driver and the swimmers. I have even been told of water skiing in irrigation ditches because there was no where else to go. Keeping harmony in the same body of water involves legal restrictions, and this is a further complication of the water recreation picture.

Inevitably, there will be conflicts between recreation and other water uses. The snow skier, using the watershed in the winter, may find he is being accused of water supply contamination in areas lower down. Too many power boats, particularly on natural lakes, disturb waterfowl habitat and destroy the serenity of the area.

I do know, as do you, that boating and these other water recreation uses are here to stay. As I see it, it is the obligation of the administrator or planner of water development sites to include recreation in his program; and since this involves many of you here, may I offer these points for your consideration.

Let us assume you put in a dam, raise the water level of a river, back the water up, and create miles of new shoreline. This new lake will be a mixed blessing, for, with its assets, it also brings its problems.

One of them is silting. Streamside planting to control silt can prolong the life expectancy of a reservoir from 200 to 2000 years. You will also need upstream cooperation from the forester, who plans the timber cutting practices, and the farmer who controls the soil. If the new lake is too shallow, turbidity from wind may render the water undesirable for swimming and fishing. Many reservoirs, of course, are con-



T.V.A. Photo

**Whatever the reason, we know being near water increases our enjoyment, particularly when the surrounding topography is pleasant or spectacular as it is at South Holston Lake on the Tennessee-Virginia border (above).**

structed to include recreation needs or are solely for recreation. Flow regulation is still the primary objective of most reservoir construction; and such reservoirs, because of their fluctuating shoreline or draw-down, are not always compatible with recreation. Recreation planning has in more recent years been given a more prominent position in what used to be considered as single purpose water projects.

In any instance, the power boat enthusiast will try to go anywhere. Seldom can you build a fence around your reservoir, and its very existence is an open invitation to the recreationist. Let us assume the reservoir will include recreation development. Should the planner wait until the dam is finished, then consider recreation facilities? I wouldn't think so.

Once the word is out that a water development is planned, the cost of land goes up in a hurry. Get the land ahead of time, then plan your facilities. Don't be content with just the reservoir area. You need the high ground too. Consider the construction of boat parks on islands and other areas, out of reach by automobiles.

People want pleasant and interesting surroundings, so the naturalist and the landscape architect will be helpful in locating recreation sites. Water resource personnel can help and so can the public health people. They can save you embarrassment by checking the possibility of contamination or pollution. If the pollution source cannot be eliminated, you will have to abandon your plans. It is better to do it then than after the development is in place.

An easy out might be to build pleasure drives and parkways along water bodies and streams. Chances are you won't get off so easily. You will probably need boat liveries, launching ramps, bathhouses, gasoline and food concessions, access improvement, campgrounds and picnic sites, pollution abatement, and means of enforcing safe boating regulations. Boaters, swimmers, fishermen, water skiers, and skin divers will all be competing for the same water, so zoning must be considered.

Don't think that you can please everyone. After you respond to the wishes of the public and build a camping facility, see how long it will be before the local motel association will be on your back for creating unfair competition. The developers will appear as if by magic with their plans for residential housing, and housing developments adjacent to reservoirs have a long history of incompatibility.

While in the planning stage you should visit other installations and view their operations, or you can consult the Coast Guard Auxiliary, U. S. Power Squadrons, U. S. Army Corps of Engineers, Tennessee Valley Authority, Bureau of Reclamation, the National Park Service, or other agencies. Further design information is available from the Outdoor Boating Club of America (307 N. Michigan Ave., Chicago 1, Illinois) at no charge.

Too many recreation sites have been poorly planned in all phases from the gatehouse to the outhouse. I was told of a water development program where everyone thought someone else was allowing for recreational development, and consequently it was left out. You might find there is some agency nearby which is already responsible for establishing recreation areas and facilities and turn your problems over to them. It could be a metropolitan agency, a county, state or federal agency, or an authority which cuts across political boundaries. If this help is not available, get private planning assistance.

Maybe you can't get all the land because the costs are prohibitive. It should be a well-known fact that the best use of low flood plains is for recreation; yet you will find business men wanting to build there anyway. This may require flood plain zoning laws which prevent any buildings below a certain level. Too many citizens have learned the *hard* way, when frozen ground, heavy rains, and an unexpected fast thaw have formed an unholy trinity and the flooding caused great loss to their investment.

I mentioned costs above, and this brings to mind financing the program. Let me start by saying I know of no purchased area, if it was well planned, that did not pay for itself. Still, it's hard to convince the businessman who sees the land come off the taxrolls.

You need the support of your own people to get across a good positive water park program. Consider the opinion of the specialist. Consult bankers who know financing, and real estate people who know land values. Line up the best brains of the community to work with you. A first-class project takes boldness and aggressiveness, and you will need all the local support you can get. Local people will benefit the most, so they should finance most of the cost of the project. Maybe your community can't support it, so how do you get it started?

Bond issues, direct appropriations, levies, and taxes, are all means. Once it gets developed, you can rely on user fees, concession stands, boat liveries, recreation cabin rentals, and might even consider a watercraft license tax and marine fuel tax to keep your operation going. It can be done. Water development sites can bring in more income than was ever received from taxes. In closing, may I repeat that undue delay in acquiring land now for water recreation developments may result in its loss.

I realize I have left much out. The subject of water and recreation is too complex even to summarize here. Let me close by wishing you much success in your work ahead. Brace yourselves; the wandering American public is heading your way.

# Terrace Channel Seeding for Wildlife

By E. R. MINNICH

*Soil Conservation Service, U. S. Department of Agriculture*
*Lawrenceville, Virginia*

WHEN youths begin to think for themselves and then put this thinking into action, they often teach old dogs new tricks. This proved to be the case when E. B. Matthews, son of H. L. Matthews of Lawrenceville, Virginia, discovered a new place for wildlife food and cover.

"E.B." noticed when planting a six-acre field to corn that one row of corn was omitted in each terrace channel to leave a strip 6 to 8 feet wide for water flow during hard rains. He immediately decided that since there were five terraces in this field, well distributed over the entire area, they might be usable in his farm wildlife program. He felt that this would serve two purposes. It would prevent the terrace channel from washing and would take advantage of excellent places for wildlife food and cover.

He requested wildlife seed through his 4-H advisor and the Southside Soil Conservation District and was furnished a few small bags of milo seed. After preparing a good seedbed, "E.B." seeded each terrace channel. He broadcast the seed to give a thick even distribution.

After the corn was harvested in early November, the cornstalks were cut into the ground with a disk as a part of the seedbed preparation for small grain in the planned field rotation. "E.B." requested the tractor operator to leave a couple of the cornstalk rows on each side of his milo strips to add additional wildlife cover for the winter.

When the hunting season opened in the fall of 1960, "E.B." got his dog and gun and set out to see the results of his terrace channel wildlife strips. He was rewarded by finding three coveys of quail on his first visit to this six-acre field. Throughout the entire hunting season, each trip to the field yielded game.

S.C.S. Photo

E. R. Minnich, soil conservationist with the U. S. Soil Conservation Service, watches Emmitt Matthews (right) "bear down" on a covey of quail. Cowpeas in foreground and milo and corn planted on the terrace ridge were not harvested but left for wildlife food. Small game is abundant on this Brunswick county farm.

The farm has a large number of terraced fields. When the land in these fields is plowed for a row crop (such as corn in this case), an excellent job of terrace maintenance is always done. The terraces on the steeper fields are usually difficult to combine grain over. When hay follows small grain, the terraces are worked down to permit ease of haymaking. After these milo strips had served their purpose, the terraces were reworked and seeded to the same hay mixture as in the balance of the field.

The present day land use program in Brunswick County shows a trend towards more and more woodland. Our quail and rabbit are not decreasing in numbers but actually increasing. The hunter's problem today is to find the game in areas suitable for good shooting. The terrace channel strip seeding idea placed into effect by this young man served his wildlife program in two ways. It provided food and cover for the game and at the same time placed it in a spot suitable for good shooting..

"E.B." carries out many other good wildlife practices on his farm. He seeds annual game bird mixtures in several patches on the power line rights of way that cross the farm. He seeds annual mixture on the tobacco plant beds after the crop has been planted. He has seeded a mixture of perennial grasses and legumes on the borders between the crop fields and woodland areas. He seeds field peas and soy beans on many odd corners and short row areas that are created in his contour tillage operations.

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## Colorful Fish Booklet Now Available

Fishermen and others who appreciate the out-of-doors should have the State Game Commission's 108-page booklet, "Freshwater Fishing and Fishlife in Virginia," in their tackle boxes or libraries.

Chock-full of information on fishing technique, game fish descriptions and habits, management and research, pond construction, and fish cookery, it also features full-color illustrations of brook trout, rainbow trout, largemouth bass, smallmouth bass, white crappie, black crappie, bluegill, pumpkinseed, yellowbelly sunfish, rockbass, chain pickerel and walleye.

To obtain this book, simply send 25 cents with your request to: Game Commission, Box 1642, Richmond 13, Virginia.

The Commission has also published a new pocket-sized folding digest entitled "Virginia Public Boat Landings and Marinas." This goldenrod-colored, 14-page, free pamphlet lists the names and locations of 138 boat landings and the names, locations, telephone numbers and services available at 180 marinas, docks and railways. Also listed are the names and addresses of U. S. Coast and Geodetic Survey authorized sales agents from whom navigational charts may be purchased.

# Virginia's Trout are Headwaters Fish

By LEE E. YEAGER

*Colorado Wildlife Research Unit*
*Colorado State University, Fort Collins, Colorado*

Commission Photo by Harrison

Brown trout as well as brooks and rainbows are available to fishermen in the Hughes River on the eastern slope of the Blue Ridge in Madison County.

IT may come as a surprise that there are twenty-odd Virginia counties with one or more trout streams. And all of these, plus many non-trout streams, hold smallmouth bass! So, on almost any trout-fishing trip in the Old Dominion, be prepared for bronzebacks. Sport-wise, there's little to choose between the two.

The first thing to keep in mind is that Virginia trout see a lot of folk. They have learned to act accordingly, and that's where special skills on these hard-fished waters come in. A Virginia trout fisherman has to be right on top with his bag of tricks. In this article we'll try to suggest a few that have paid off over the years.

But let's get basic first. Trout, in Virginia, are headwaters fish—all else is too warm, except for a relatively few springs, cold-water tributaries and exceptional streams such as the Smith River below Philpott Dam. This means mountain country and clear, rocky rills and brooks instead of mainstem waters. Other than a few upstream stretches, the biggest trout waters will likely be beaver ponds, about which we'll give special instructions a little farther on.

Second, the trout are mostly brooks and planted rainbows, neither as wary as brown trout but plenty sharp where they see fishermen several times a day. So, be prepared to use real skill in approach, sizeup of pool or riffle and, finally in presenting gray-hackle yellows and parmacheene belles.

Third, even the headwaters, or many of them, are roily in the spring and after every hard rain, so don't wholly disdain bait or light hardware. Some of you will hang me for this, but I still say that bait can be a sporting proposition. It's about the only way you'll catch eight trout when the water is too murky for them to see flies. We'll suggest some methods better than just dunking worms a few paragraphs on.

For general orientation, then, you'll have small waters, mostly streams; wary to super-wary trout; and lots of non-fly water when the streams are running high. It will pay, therefore, to organize trout-fishing along these lines, particularly early in the season. Later, when the streams attain late-summer and fall levels and distinct clarity, lean wholly, if you wish, on artificials and your very best fly-fishing skill.

Tackle-wise, it's well to be governed by fishing conditions and the size of the trout. We've suggested, in a general way, early- and late-season conditions. As for the specks, they'll average small—two or three to the pound (fine skillet size) —with an odd pounder and rarely a two- or three-pounder thrown in. So, go light on the rod, with line to match. A 2½-ounce fly rod, an HDH, or lighter, line, and 3X leader is fine, though a somewhat heavier rod can be used. A short rod, not over eight feet, is best, for most casts along brush-grown streams will be short, seldom over 30 feet, and more likely a mere flip to get your fly behind the next big rock. To handle either bait or flies, and especially flies with brush on both sides and over-head, use tapered lines and leaders. I like double-taper lines, which can be reversed. You'll have little opportunity to use torpedo-headed lines for what they are intended—long, long casts—on Virginia trout waters. For leaders, I like the 3X, one-pound test, tapered and single-filament; but you can tie up the approximate equivalent by using 2½-foot lengths of 1X, 2X, and 3X gut. Be sure of taper, especially, the leader; you'll never go back to level gut or nylon after you get the feel of tapered action.

In "tight" waters such as mountain headwaters offer, spinning gear is a little out of place despite its matchless performance where you can get a plastic bubble and an imitation 'hopper 70 feet out with a mere snap of the wrist. The larger beaver ponds, and the comparatively few "big" streams holding rainbows and browns, are spinning possibilities, of course, and you would not want to pass them up.

We mentioned earlier things you can do on beaver ponds. But first, let's point up what beaver do to trout in eastern waters. Mostly, the flattails are no good, for Virginia waters, already close to the critical 65-70° F. temperature, are warmed still more by the stilling and spreading of cold-stream water. The first year or two might show an advantage, for there's no question about food—beaver ponds are usually loaded. But as silt accumulates and shallower and shallower water over a black mud bottom warms up, you get more stone-rollers and suckers and fewer trout. Many Virginia beaver ponds exceed the temperature tolerance of even brown trout, which is around 80° F.

But once in a while you'll find a beaver pond that's got it: 60° F. water, depth, cover, food, and a good current of oxygen-laden water. Then, Mr. Tronter, lay your strategy well for, trout-wise, you may have right here in one quarter-acre some of the best the Old Dominion has to offer. You can begin with a careful approach.

Chances are fair, but only fair, that this choice beaver pond hasn't been fished. Fished or not, there's no use in advertising, so approach from below, or well above. You'll probably be going upstream anyway, so this part is easy. When you locate such a pond, or one you hope is *it*, don't circle the path along the shoreline; and, for Heaven's sake, don't walk out on the dam. A good way is to cut uphill, 60 or 80 feet away, and sit down for the sizeup. If trout are present, and feeding, it will take less than five minutes

to establish the fact, judging from rises in various parts of the impounded water. If your inspection from an uphill rock says "Yes," do one of two things: work in under the dam and fish over it, as nearly hidden as possible; or circle around and come downstream, keeping to cover as you progress noiselessly along.

If your approach is from below the dam, and this is generally best, I've found, work up slowly and don't be in a hurry to cast into the three-foot circle just 20 feet to the left. Old Brook-sides will still be hungry five minutes later, and a well-presented coachman or black gnat female will come nearer getting his affirmative attention than a hastily cast fly, spinner, or gob of worms. As a matter of fact, don't climb up on the dam—go up just high enough to flip out the fly with light tackle. Usually you merely need to see over the top of the structure to do the job properly.

If you elect to go upstream and work down, go slow, quietly, and easily, as suggested. I make it a point to hit the stream 50 or 100 yards before impounded water shows. The stream itself, remember—since it will be full of current, oxygen, and food enroute to the pond—is good water. Remember, too, that noiseless, quiet-footed approaches, *into the sun*—which throws shadows backward—are the ticket. Harrassed trout run nearly as fast from moving shadows as from man, so keep the sun to your front whenever possible. Then, with these points in your favor, you ought to net two 10- or 12-inch brookies out of the riffles before you hit the pond proper.

Now, where the stream enters the pond, is one of your best bets. Don't rush this junction of waters; instead, be on the lookout for it, and cross the stream, if necessary, to take advantage of pools, riffles, or cover. This spot is good for at least one trout, and often more, for some stream-pond junctions may be yards and yards long. After you hit the pond proper work around, slowly and quietly, on the side you have chosen. You can work the dam and then along the other side in the same manner. I've known beaver ponds to yield eight-trout limits when these tactics are employed.

It's not amiss to describe how to find off-beat beaver ponds. Usually, you'll be going upstream, following a well-beaten path, with every riffle and pool worked over many times per week. In such cases, keep your eye peeled for tributaries, no matter how small, for a mere trickle often leads to beaver workings. When you find such a side stream, and particularly when two or three small rills enter the main stream at close intervals, climb the hill! That is, get up on a bench or point where you can look down into the main valley and its tributary ravines. In such cases, there's only one thing to look for—clumps of dead trees in the valley bottom.

Commission Photo by Kesteloo

Internationally-known fly fisherman Joe Brooks (above) has acclaimed the Virginia Game Commission's experimental "fish for fun" area on the upper Rapidan River an unqualified success.

Almost always, a dozen dead or dying red spruce, alder, or willow clumps are due to impoundment, for no tree will live more than a year or two when the root collar is covered permanently by water. White ash, alder, and willow live longest under such conditions, and spruce, oaks, and hickories die most quickly; so you can go by the kind of trees that are dying or dead. If the trees are long dead, with sloughing top branches and lodged trunks, don't get too excited for such a beaver pond, active or dead, is likely to have passed from the trout to the sucker stage. But if the foliage is brownish in July, or if the smaller branches have not dropped off the trees, go down and make a closer investigation; it just might be the pond you are looking for. And, if it is, you know now what to do!

We said something a while back about bait. Personally, I don't go for a gob of garden hackle set-lined in the deeper pools, but a wiggly worm carried downstream on a Colorado spinner or similar hardware is little different, in principle, from a drifting wet fly. In roily water only tackle of this sort will attract food-glutted trout, and the fisherman had well be prepared to use bait in a sporting manner. In late summer and early fall, grasshoppers floated downstream on fine monofilament are deadly, too! But since this is also the best dry-fly season, it's up to the individual to choose his lures for an autumn afternoon.

Wary fish will be a problem from the opener until the December closing date. But there are ways to cope with educated brookies and rainbow trout: It's hide! Years ago I was fishing an eastern stream with a wised-up companion who said, as we drove off in late-summer pre-dawn: ". . . these brookies are so scary that they cut across sandbars going around bends! We'll have to out-wit 'em!" We did pretty well on that trip and here's how we did it. It'll work in Virginia's headwaters:

The North branch of Sand Creek was accessible and, therefore, hard fished. In late September, despite a respectable residual population of the more learned trout, we worked a sneak: looking up or down stream for 100 yards or so, we located likely pools and bank cut-outs. Al went upstream and I down, meaning that he used dries and I wet blue-bottles and western bees. However, it made little difference for we evened up, and I found out that we used approximately the same tactics—the crawling cast!

Fortunately the willows were only about waist high along this particular stretch of stream, making the sneak easier. And, literallly, we crawled up to the shoreline and, without exposing a rod butt or hand, dappled late-summer patterns over the bank. It was an elbow-knee proposition, mere dropping of flies on a very fine leader. But it worked! Both of us creeled the 10 trout allowed, despite fishing pressure that identified man as the fiend incarnate—when the trout saw us they fled, headlong, to cover under the bank.

So, here's to eight brookies and rainbows next opening day, or the next time you give the square-tails a full day of patience and skill.

# The Effect of Owl Predation on Rodent Populations

By JACKSON MILES ABBOTT

*Alexandria, Virginia*

THERE have been many scientific studies in field and laboratory over the past several decades which have proved conclusively that owls as a group subsist mainly on rodents. The percentage of rodents to other prey species such as birds, reptiles, etc., varies not only with the species of owl but with the season of the year and with the specific locality.

A four-year study on horned owls in the north-central part of the United States conducted by the Iowa State College of Agriculture and Mechanical Arts in the period 1932-1935 showed that rabbits were the preferred prey species the year around. The percentage of rabbit remains in pellets was highest in the winter and lowest in the summer while that for birds was low in winter and high in the summer. The reason is obviously due to the scarcity of birds in winter and their relative abundance in summer, after the migrants have returned from the south.

This study and others show that predation by owls (or any other predator) on a given prey species does *not* exert a dominant influence on the normal population of prey species taken. There appears to be a certain natural level of population for all species of animal life occupying any given locale. Continuing normal predation by predators on prey species in the locale does not apparently reduce the population of prey species below this level.

U. S. Fish and Wildlife Service Photo

The snowy owl (above) nests in the Arctic but invades the United States every four years when the cyclic population of its favorite prey, the lemming, hits the low point.

When there is a marked temporary influx of predators into a locale (such as in certain favored areas on migration) populations of prey species may temporarily drop below their natural levels. As the predators move on because of migration or because of scarcity of food the prey species populations invariably regain the normal level for that locale.

In addition, cyclic explosions and dearths in populations of certain rodents are a well-recorded fact. Each peak of the cycle has its direct effect on the numbers of predators present in an area. When a major prey species hits the low point on the population cycle, predators favoring them are forced to turn to other prey species or to evacuate the area. The four-year cycle of scarcity of lemmings in the Arctic tundra has been cited as the reason why snowy owls invade the United States about every four years.

An example of sudden man-made changes to an environment which caused a population explosion of mice which, in turn, resulted in a phenomenal increase in certain winged predators is the case of the Dulles International Airport at Chantilly, Fairfax County, Virginia. At this location some 9,000 acres were cleared of farms, buildings and woods in 1957 and 1958 to make room for three two-mile-long runways for jet aircraft. Mice and other rodents which formerly inhabited the man-made structures were forced into the open areas where there was an abundance of weed seeds to feed on. Enemies such as cats and dogs had disappeared with the former human inhabitants of the area and the rodents increased prolifically.

The first indication that this excessive population of rodents had attracted a concentration of winged predators in numbers which are unusual to northern Virginia was in November 1959. Colonel and Mrs. Louis Ely, who live near the northeast edge of the airport area flushed ten short-eared owls from a small section of Spanish needle grass near their home. Other observers subsequently reported this owl in numbers varying from 12 to 25. On the 23rd of January 1960 Mr. James Eike of Falls Church and a group of bird watchers made a census of most of the Spanish needle areas along the north and eastern borders of the airfield. Their total count was 65 short-eared owls!

Along with the owls were a maximum of five rough-legged hawks (a most unusual number of this rare winter visitor for one area in northern Virginia), 15 marsh hawks and about 10 red-tailed hawks.

It was obvious to even the most casual observer that this concentration of winged predators was caused by the unnaturally dense population of mice. It was difficult to walk more than a step or two in the grassy areas bordering the landing strips without stepping on a mouse tunnel, runway or burrow.

In the winters of 1959-1960 and 1960-1961 Mrs. M. Brantley Peacock and her two sons, Richard and Daniel, of 200 Highland Road, Fairfax, Virginia, conducted some mouse density studies on a few acres at the airport site. For comparison they also trapped mice on several "typical" farm field areas a few miles from the airport. Their limited studies revealed that the average mouse population of typical Fairfax County farm land is about 15 mice per acre, while that in the mouse population eruption area at the airport was 91 mice per acre—a six-fold increase!

Trapping studies by the Peacocks indicated the mouse eruption continued to early December 1960 when a heavy snow fell on the area. Three more snows fell in January and February 1961 which accumulated the greatest snowfall for this area in many years. When the snow finally melted by early March 1961, subsequent trappings revealed that the mouse population explosion was over and back to what appeared to be normal for the general region. The apparent effect of this on the number of short-eared owls present is revealing. Whereas the highest count of short-eared owls (65) made in the 1959-1960 season was on January 23, 1960, the highest count for the 1960-1961 season was only 11 made on December 3, 1960, a few days before the first heavy snow. Colonel Ely reports that a total of only four short-eared owls have been seen between 4 December 1960 and 15 March 1961.

That the owls subsisted principally on mice while wintering at the airport is borne out by an analysis of pellets collected in November 1959 and December 1960. A total of 88 pellets contained remnants of 102 mice, five small birds, one grasshopper, and one pellet had some unidentified matter. This represents the following prey species frequency expressed in percentages: mice, 93.8 percent; birds, 4.2 percent; insects and other, 2 percent.

It is interesting to compare these results with those obtained from a pellet analysis study of short-eared owl predation on "normal" populations of prey species inhabiting a salt marsh in the San Francisco Bay area. This study was made by Richard F. Johnston in the winters of 1952 through 1955 and was reported in the Wilson Bulletin, Vol. 68, No. 2 for June 1956. His study revealed the following frequency in percent of prey: rats, mice and shrews, 79.8 percent; birds, 15.2 percent; insects, five percent.

A comparison of the Chantilly pellet study and Johnston's pellet analysis seems to indicate that if a preferred prey species (i.e. mice) is available in abnormal quantities the predator will concentrate on these to the near exclusion of other "normal" prey species (i.e. birds). It should be noted here that small land birds were present in the Chantilly area in considerable numbers during the winters of the mouse population eruption. Horned larks, longspurs, snow buntings, redpolls (1959), goldfinches and several species of sparrows were present in large numbers in the areas of short-eared owl concentrations but were virtually neglected by the owls as a prey species in favor of the excessively abundant mice.

Now that the mouse population at Chantilly has apparently receded to normal for the general area, it will be interesting to observe whether there will be a recurrence of an unusual number of short-eared owls, rough-legged and other hawks in the winter of 1961-1962. In the light of past experience if the mouse population at Chantilly has, in fact, receded to normal, there will not be any abnormal concentration of winged predators there next winter.

Drawing by the author

When 9,000 acres in Fairfax County, Virginia, were cleared to make way for Dulles International Airport, rodents—and short-eared owls—became unusually abundant.

## The Sparrow Hawk

The little sparrow hawk is one of the prettiest, tamest, and most sociable of hawks. This grave little falcon is commonly seen perched along telephone lines or hovering with swift-beating wings almost motionless over fields watching for grasshoppers and mice.

This bird is widely distributed throughout all but the arctic regions of the Western Hemisphere. Although there are twenty-three different subspecies, only the eastern sparrow hawk is found in North America.

This is one hawk which nests in tree cavities, crevasses in rocks, holes in banks, on buildings adjacent to houses, and even in bird boxes. As is normal with hawks, the female is larger than the male, and during the mating season in April and May, when both perform aerial gymnastics, she is the aggressor. The three to seven, but usually four or five, whitish eggs are covered with fine brownish spots. Incubation, mainly by the female, take about twenty-nine days.

A peculiarity noted about the young in their nest is that the females seem invariably to be more aggressive and ill-dispositioned than the males. Another peculiarity is the fact that this is one of the few instances among birds in which the sexes are unlike in their juvenile plumage.

This little hawk subsists mainly on grasshoppers and other insects.

*Principles of Game Management*

*Part Four:*

# Stocking

By JOHN MADSON and E. L. KOZICKY
*Olin Mathieson Chemical Corporation*

GAME stocking is man's effort to increase a game supply on a range by obtaining game elsewhere and releasing it on that range.

This principle of game management was most prevalent in this country between 1930 and 1950, when many state game farms poured pen-reared game into areas where existing game supplies could not meet the demands of hunting. Impressive stocking statistics were compiled and released each year by state game departments—"numerical evidence" of an effective game management effort. But many of these early stocking programs were unsuccessful, and great numbers of game birds and animals were stocked with no visible increase in autumn game supplies.

In such cases, man tried to second-guess Nature and beat her at her own game. But Nature herself normally overstocks her game ranges; large numbers of game are born into an area each breeding season, but fatal "limiting factors" usually trim this bumper spring game crop until it is in harmony with the capacity of the game range to support it.

A game habitat is capable of supporting just so much game and no more. Good range can usually support a large game population; poor range can support only a small game crop, if any. Every game habitat has a limited capacity for game, and if man introduces game beyond that capacity the stocked game simply evaporates from the habitat.

Game supplies can be depleted by severe weather but can recover automatically when conditions improve. Although stocking may hasten that recovery, it is usually unnecessary on good game range. On a southern Iowa game area, a severe winter resulted in a spring quail population of only 90 birds. This increased to 501 birds by fall. Two years later —with good weather—the fall population had risen to 2,316 quail. Nature's method of restocking a receptive habitat was sufficient.

Commission Photo by Harrison

When good game habitat is suitable for a game species that does not exist there, stocking is practical. Transferring wild - trapped turkeys (as at left) to suitable range and introducing foreign game birds are being tried in Virginia.

On the other hand, a suitable habitat may be empty of game and cannot be stocked by nature because of distance or physical barriers. In parts of Pennsylvania, the wild turkey was nearly extinct for many years because of broad changes that civilization had caused in the original forest. But through the years, that forest matured from a grouse-deer habitat to a squirrel-turkey habitat and when the proper forest stage finally evolved, turkeys were successfully restocked by man. This technique has worked in southwestern Virginia also.

In some areas, suitable game range still exists but the original breeding stock has been extirpated. Under modern protective law, original game can often be successfully stocked in these areas. This has resulted in the re-establishment of beaver, antelope, deer and wild turkey in many parts of their original ranges.

But indiscriminate stocking in adequate habitat is often a waste of time and money. Such stocking may not only fail to increase game supplies, but may divert money from valuable management programs. In Indiana, it has been estimated that each stocked quail that survives to be bagged by the hunter costs $40. In Michigan, each summer-stocked pheasant bagged by hunters costs about $16.50. The story is much the same in other states; wholesale game stocking usually results in retail birds.

Game stocking is most practical:

1. When a good game habitat has been depopulated by severe weather or other temporary factors.
2. When such a habitat is suitable for a game species that does not exist there, or near there.
3. When a small game range is heavily stocked and heavily hunted shortly after stocking.

The last may be a state-operated public hunting area, a form of subsidized hunting that can provide good shooting on a limited game range for a short time. In many states, however, these "put-and-take" shooting areas are being replaced by commercial shooting preserves that can be operated by private individuals at a profit. Private enterprise has always been more efficient than public agencies, and in this case it protects state game departments from the criticism of "playing favorites" among license holders—an inequity of hunting opportunity that no public game agency can justify.

A basic weakness of stocking is that a pen-reared bird is usually expected to survive in an environment that is too hostile for even the wild birds that were born there. In many cases, it is more effective to trap and transplant wild game from areas of high population. Although even wild game is at a disadvantage when not on its native range, it may have a better chance of survival than pen-reared game.

A few state game departments, knowing the pitfalls of haphazard stocking, are trying to develop strains of game birds better adapted for survival in the areas where they are most needed. These studies are being conducted at such game farms as Poynette, Wisconsin; the Delmar Station in Ohio; the Boone Game Farm in Iowa; and the Cumberland State Game Farm in Virginia.

Much interest hinges on these studies, for although it is seldom practical to improve game habitat on a grand scale, it may be possible to breed strains of game that can survive in the existing range if the shortcomings of that range are within the tolerance limits of the game species.

# VIRGINIA WILDLIFE

☆ ☆ ☆ ☆

# CONSERVATIONGRAM

## Commission Activities and Late Wildlife News . . . At A Glance

DISASTROUS FISH KILL DELAYS LAKE SHENANDOAH OPENING. The re-opening to public fishing of 39-acre Lake Shenandoah three miles east of Harrisonburg has been delayed for an indefinite period because of a recent fish kill which has killed the 42,900 adult game fish just stocked there in April. Insecticides or other chemical pollutants are suspected by investigators as the cause of the massive fish poisoning. Technicians at the federal Leetown Disease Control Laboratory at Kearneysville, West Virginia, have determined that neither parasites nor disease caused the kill. Virginia Water Control Board specialists are testing lake water and dead fish for evidence as to the cause of the kill.

Lake Shenandoah was built by the Virginia Commission of Game and Inland Fisheries in 1957 with the aid of federal Dingell-Johnson funds derived from an excise tax on fishing tackle. Opened to the public in April 1958 as a trout lake, it was stocked with trout until this year when it was converted to a bass-bluegill lake because it appeared from biological investigations to be better suited for these species. Drained and fitted with a more adequate draining device last winter, it had just been re-flooded and stocked with 39,000 bluegill bream and 3,900 largemouth bass from the commission's Stevensville hatchery in King and Queen County when the fish kill occurred. Plans to open the lake on June 20 have been shelved and the lake definitely will not be opened this year.

THREADFIN SHAD SUCCESSFULLY TRANSPLANTED. Virginia Game Commission personnel from the Marion Fish Hatchery in Smyth County successfully transplanted some 5,000 adult threadfin shad from the Fort Loudoun Reservoir in Tennessee to four Virginia reservoirs during the week of May 22. Kerr Reservoir (Buggs Island Lake) received 2,000 of the small forage fish while 1,000 were stocked in each of three other western lakes--Philpott, Claytor and Carvins Cove. These shad feed on minute animal and plant life in the vast open spaces of large reservoirs and are expected to spawn and provide an important source of food for striped bass and other large predatory game fish.

The shad, provided by the Tennessee Valley Authority and the Tennessee Game and Fish Commission, were transported in game commission hatchery trucks by fish biologist Dixie Shumate, Jr., and hatchery employees Warren Harrington, H. C. "Buck" Woods and Ancil V. Stephens.

LACK OF FOOD LIMITING DISMAL SWAMP DEER HERD. Inadequate nutrition seems to have played an important role in determining the fate of the nine white-tailed deer found dead in Dismal Swamp this spring. One of these deer, a three-year-old doe found April 10 near the line dividing the Triangle and Simpsons hunt club properties in Nansemond County, was autopsied by Dr. Herman Farley at the State Department of Agriculture's Ivor Laboratory on April 11. Here is what Dr. Farley found: Evidence of pneumonia and peritonitis and foam at the mouth and nostrils; a complete lack of visceral fat (weight only 70 pounds); reproductive tract in an inactive condition; external parasites (ticks); and stomach contents of doubtful nutritional value (heath-type evergreen leaves and twigs of other vegetation in the swamp).

The increasing availability of food during the summer should alleviate the deer food shortage temporarily but a high deer harvest by hunters next fall will be required to prevent a recurrence of the die-off next spring.

It is unsafe and illegal to tie up to a buoy or channel marker. If you look at the boat closely, you can see a registration number. The number must contrast with the boat so that it may be easily read.

When lawfully water skiing, either an observer must ride in the boat, a rear-view skier must wear a life belt or preserver. None of the three is in ev

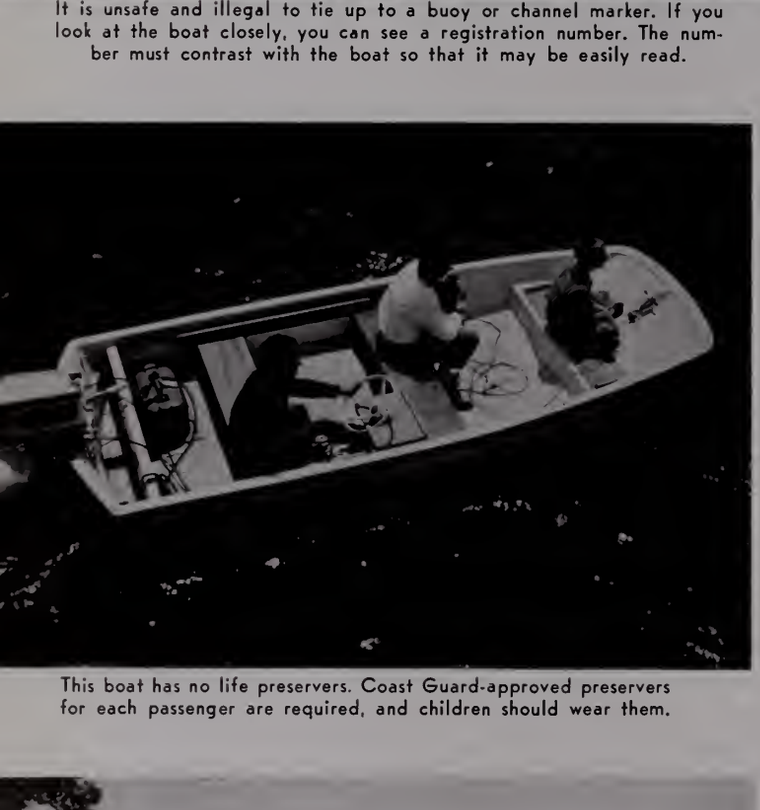
# Find the Boating Safety R

Text and Photos

Each picture on this spread illustrates at least one dangerous act of carelessness or violation of the Virginia Boating Safety Act. Can you pick out the errors?

July 2 through July 8 is National Safe Boating Week. America's more than 40,000,000 pleasure boaters have added this new observance to their traditional water-borne celebration of Independence Day. National Safe Boating Week is becoming as accepted a part of the 4th of July scene in many American communities as red, white and blue bunting, box lunch picnics and oratory by local politicians.

***Keep Boating a Safe Family Recreation — Obs***



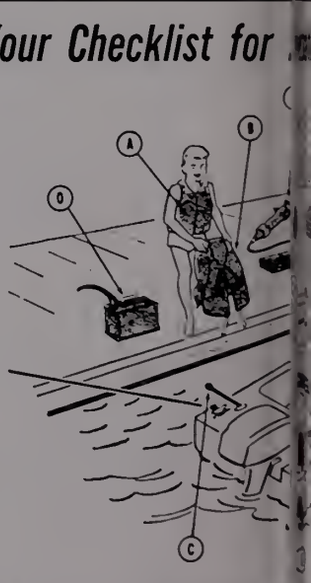
This boat has no life preservers. Coast Guard-approved preservers for each passenger are required, and children should wear them.

Operating a boat while intoxicated is prohibited by law.

Reckless driving and speeding near smaller boats is unsafe and illegal. Small boats are easily swamped by such a wake.

It is unsafe to wash a deck in bare feet. One slip and you're overboard.

## Your Checklist for




Millions of Americans have the nation's waterways. Boat his mate and the whole crew k Here's a checklist on the items by marine safety experts. How

- ☐ (a) & (b) life preserving device for every passenger
- ☐ (c) proper lighting
- ☐ (d) horn or whistle

must be mounted on the boat to enable the operator to watch the skier, or the here. Also, this boat has a 25 horsepower motor but is not numbered.

Never throw the anchor; gently heft it overboard. Never stand on the rope because it may wrap around your ankle and pull you overboard. Lastly, be sure the rope is tied to the boat!

# Violation in Each Picture

rge H. Harrison

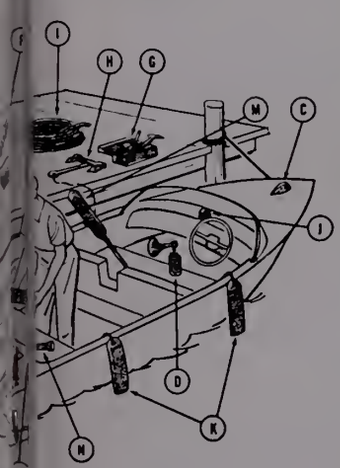
The fact that there has been no significant increase in boating accidents despite the sport's recent surge in popularity is due in large measure to the organized groups that devote time and energy to boating safety and education. In Virginia. one of the most outstanding of these groups is the U. S. Coast Guard Auxiliary. To Flotilla 51 of Richmond. a special note of thanks for cooperation in making these photographs possible.

As Virginia begins its second year under the State Boating Safety Act, boaters are urged to take care to avoid accidents.

***National Safe Boating Week July 2-8, 1961***

Anyone who fills the gas tank while smoking is out of his mind. Ignition of gasoline fumes causes many explosions.

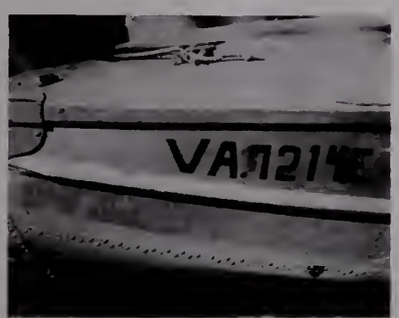
ting Safety



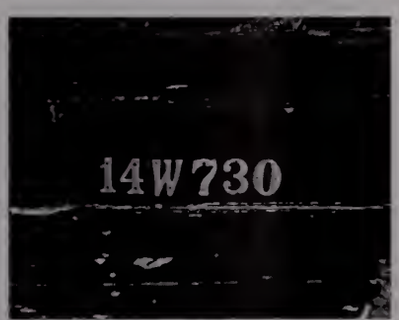

vered a new world of fun on even more fun if the skipper, eir craft is properly equipped. ating equipment recommended vour boat check out?

| | |
|---|---|
| e | ☐ (j) compass |
| guisher | ☐ (k) fenders |
| t aid kit | ☐ (l) bilge pump |
| l kit | ☐ (m) paddle |
| chor | ☐ (n) flashlight |
| e | ☐ (o) gas can |

Courtesy O.B.C.




Registration letters must be separated from numerals by hyphens or spaces.




Old-style U. S. Coast Guard registration numbers should be removed.

If rules of the road are followed, jam-ups will not occur. If the Texas boat is in Virginia 90 days, it must be registered here.

Warden Bill Lankford appreciates the understanding attitude Virginia boat owners have taken toward the enforcement of the Virginia Boating Safety Act.

# The Changing Job of a Virginia Game Warden

By W. E. LANKFORD

*Virginia Game Warden, Hampton Roads District*

Commission Photos by Kesteloo

THERE was a time not so long ago when, between hunting and fishing seasons, a Virginia game warden had a considerable amount of time to spend in public relations and other non-law enforcement work. Now that the seasons follow one another so closely and boat law enforcement has been added to his activities, he finds that his duty to the public has no season or time. When his day ends he still has to face the many telephone calls when he gets home. When he makes his domestic calls such as going to the grocery store, going to church, going to various meetings and any place his way of life may lead him, he finds that his job is almost a twenty-four-hour-a-day proposition. His work is ever going on while others are off work, and, in taking in all phases of his work, he is often on the job seven days a week.

A warden has to believe in his job in the conservation of the game, fish and other natural resources of this State to be able to perform his duties to the best of his ability and according to guidelines set up by the Game Commission relating to warden activities. If he considers it his job merely to go out and work for eight or ten hours a day to get his daily hours over with, then goes home and forgets his work until eight the next morning, he is not doing his best for himself, the people of this State or the Commission. He has to be devoted to his job, and when he feels this way he will find his work will be a pleasure and 10 times more rewarding.

A warden's duty includes seeing to the safety of every sportsman he comes in contact with. How rewarding it is to be able to report to a family the safety of a friend or relative after a long, hard search, and how heartbreaking it is to a warden to return from a weary search and have to report the opposite, wondering all the time what more you could have done to inform the public of safety measures. On meeting the family, getting a hearty "thanks" for your efforts is a wonderful reward.

There have been a lot of changes during the time I have been with the Game Commission. I firmly believe that a warden can now work with his head high and be proud of the position that he holds. The opinion of the public has changed. There was a time when landowners didn't want wardens on their land and would tell them, "If I need you, I'll call." Now the time has come that landowners want to know why wardens don't have more time to devote to the protection of their property.

A warden's job is becoming more demanding of him than it ever has. The public now leans on him for help, advice, and leadership. This is especially true of our younger generation. Much has been accomplished through wardens working with our schools, civic organizations, and clubs. In doing this we now realize that the people of Virginia know we are working to preserve our natural resources for their benefit.

The wardens took over the new responsibility of enforcing the Boating Safety Act of 1960, and on only a very few occasions did persons make known their resentment of the fact that boating was going to be taxed and the laws pertaining to his registration and operations enforced. It seemed to me that the boat owners were always glad to see the patrol boats, marked in black letters "VIRGINIA PATROL" as they sped by with families afloat to enjoy a nice Sunday afternoon on the water.

On returning to the boat ramp at the end of a long day's work in the hot sun, his face a rosy red, a warden would then get the familiar host of questions about boats and operation. As a whole, I believe the boat operators looked on the work of the game wardens with more respect and understanding than any other single group he has had to face.

The warden's job has become more demanding than ever before.

The Virginia game warden—in the fields and on the waters in the rain, shine, cold, and heat—looks forward to doing a good job with sufficient rewards. He is firm with the violator, for when a person does not buy his license he is taking from the streams that which does not rightfully belong to him, when he is unlawfully on another person's property he is taking from the rightful owner without permission, and when he exceeds the limit in game and fish he is taking from the law-abiding sportsman and from our younger generation whom we hope will enjoy the same great sports we are now enjoying.

It is plainly written that the duties of a Virginia game warden are becoming more varied and more demanding day by day. He is now respected for his work by the general public, and the violator has more respect for him, too.

# 10 Commandments of Good Law Enforcement

By JULIAN H. HILL

*Virginia Game Warden, Richmond City*

I HAVE been a state game warden with the Commonwealth of Virginia for more than 35 years, having been appointed by Col. McDonald Lee on October 27, 1925. Since July 1, 1936, I have served as state game warden in the city of Richmond. Over this 35-year period, I have contacted hundreds of thousands of people while enforcing the game, fish and dog laws of the State of Virginia and the city of Richmond.

While carrying out my duties, it has been necessary for me to bring before the courts of the Commonwealth thousands of violators of the laws coming under the jurisdiction of my office. This naturally has made some people bitter against me and hold malice towards me as they do toward any enforcement officer who carries out the duties of his office in the manner expected of him.

I am proud of my record with the Commonwealth of Virginia as an enforcement officer, and can truthfully state that during the more than 35 years of service rendered. I have never had so much as *one* complaint filed against me by the people I have had to prosecute.

Commission Photo by Kesteloo

Confiscating illegally held wild animals such as this ocelot, a South American wild cat, is one of Warden Julian Hill's many and varied duties as Richmond City warden.

Feeling that some of the younger enforcement officers of today would also be proud to achieve such an accomplishment, I would like to pass on to them how, I feel, I was successful in obtaining such a record by setting forth the "ten commandments of good law enforcement" which I have tried to follow during my career as an enforcement officer:

(1) Love your job and be interested in your work; respect your superiors and the dignity of your office.

(2) Never set yourself up as a master; rather, be a servant of the people.

(3) Do not feel that you have the right to push people around because you wear a badge and gun. You don't. It has never been necessary for me to lay the weight of my hand on anyone. It has been said that the pen is mightier than the sword, and, in this connection, I feel that education is our first line of defense. If we teach the boys and girls of today how to be good citizens, we will have little trouble with the men and women of tomorrow.

(4) Do not attempt to treat every person the same in administering the law. Practically every person is of a different temperament and has to be handled and dealt with individually. First, feel him out, and then proceed in solving your problem.

(5) Never lose your temper when enforcing the law regardless of how bad the situation may appear to you. Always keep calm, cool and collected. This will enable you to handle all matters in the proper manner. If the person you are dealing with becomes abusive, just keep smiling. If the situation becomes too bad, you can place the person under arrest and the courts will protect you. This is by far a better way to handle the situation than to be drawn into the embarrassing position which the person is hoping for. Be smarter than the offending person.

(6) Never draw your gun or use force unless it's a case of self defense. Remember, you can use your gun only when a felony exists.

(7) Never let personal feelings enter into your relationship with any offender. If it becomes necessary to take a person to court, make him feel that you are simply doing your duty, and, after the trial is over, assure him that you are still his friend and willing to prove it.

(8) Always be fair when administering the law. Treat everyone alike, no matter how close they are to you—even if it's your family. This will create the highest respect for you even from those you have to prosecute.

(9) Your manner in dealing with the courts is an important factor in good law enforcement. Handle yourself properly in court and always be fair to the defendant. Present your evidence as you see it and let the court be the judge, remembering that our duty is to "prosecute" not to "persecute." If the courts lose faith in you, then you are finished as a good enforcement officer.

(10) Carry yourself at all times so that you will be a credit to the government you serve, the people and yourself. This is one of the most important factors of being a good, highly respected officer, because the people are your judge and their eyes are upon you at all times.

I hope these ideas will be of some benefit to others who may choose the field of law enforcement as their life career and desire to be effective and respected law enforcement officers.

# I HIKED ACROSS DISMAL SWAMP

"It could not be lake Drummond! Had I not crossed Portsmouth Ditch yesterday afternoon? And had I not put miles between me and Portsmouth Ditch? No matter how I reasoned it away, it was lake Drummond."

By EGBERT G. COURAGE

*Williamsburg, Virginia*

LAST July I hiked across Virginia's Great Dismal Swamp. My decision to slog across this desolate area was made in 1959 when I saw a map that covered Lake Drummond and the surrounding terrain. I was intrigued by the fact that, aside from the blue symbol for "swamp," the map was almost bare. Here, I thought, is my chance to explore undisturbed country, something I had done as a youth many times in my dreams—some 30-odd years ago—while tramping page by page across all kinds of perilous terrain with superbly imaginative chroniclers.

It was still just a fascinating idea until July 1, 1960. On that date I acquired some maps which, when pasted together, depicted the area from Suffolk, Virginia, south to the Virginia-North Carolina border, and east beyond the Dismal Swamp Canal which is a part of the Intracoastal Waterway. I had thus a composite map on which I could plot a route and work out compass directions.

Preparation soon moved out of the delightful world of dreaming into the less attractive one of reality. I made walks across country, at first without a pack and later with one, and then took overnight "shake-downs" into nearby woods. As a final step I drove around the periphery of the area on a Saturday. While parked on a dirt road near my planned starting point, I caught sight of the tail of a snake disappearing into the tall grass to my left; at almost the same time my wife was stricken momentarily dumb by the sight through the rear window of a heavy-bodied snake entering the grass to the right rear.

I had decided on Tuesday, July 19, as the day I would start. I had packed my pack days before; I had sharpened my machete and ground down the edge of my heavy knife; I had appraised my wife of my exact route. Despite lowering spirits, despite the growing apprehension that I had bewitched myself into all this, I was ready to go.

My wife, as nervous as a mother hen, let me out on a bridge that spans a small stream running southeast into Dismal Swamp. I buckled on my cartridge belt holding my two heavy knives, a compass and a canteen, swung up my pack, picked up a canoe paddle which was to be my swamp walking stick and snake-queller, said a pseudo-confident "be good now," and stepped into the woods. This was 11:00 a.m.

The first half mile was about the most *dismal* half mile I have ever walked. The necessity to fight past fallen limbs and trees hidden by thick, entangling grass, and through intertwining branches of head-high shrubs did nothing to buoy my spirits.

Although I had carefully worked out my initial compass direction, I was not sure of the accuracy of the map from which I had taken it. I could have saved myself this concern; I came out exactly as planned: at the beginning of a small canal, "Washington Ditch," which leads southeast to Lake Drummond.

Along the ditch on the north bank runs a one-lane dirt road, presumably all the way into Lake Drummond. But since I was exploring, I stuck to my original plan to go cross-country across Dismal Swamp and struck out on my prearranged compass direction of 109°, a heading which would take me slightly south of east and would land me 10 miles later at the Dismal Swamp Canal just opposite a small community called Wallaceton.

Confident now, I again swung my pack aboard and headed toward the woods which lay just north of the dirt road. I found the woods to be quite open and rather easy walking. I tramped along, stopping frequently to check my wrist compass and to get a breather. I had walked about a quarter of a mile when I ran into a cornfield. Some pioneer had got to this part of Dismal Swamp before me, so I turned and walked back to my starting point, using the so-called "back azimuth" compass reading. I walked east along the dirt road for a half mile. Through the trees on my left (to the north) I saw the eastern end of the cornfield. Then I again took up my cross-country compass direction of 109°.

By now it was 12:30 p.m. The woods were not difficult walking; although there were many fallen tree trunks and limbs, there was no grass and few shrubs to hide them.

For two hours I traveled through forest of this kind. The fallen wood was covered with bright green moss; the forest floor was a springy, firm mud. In occasional spots myriad saplings, some bushes, some thorny greenbriers, and a few giant canes in various combinations interrupted, for the worse, the monotony of the bare forest. Nowhere was there a stream, a spring, or even stagnant surface water.

At 3:30 p.m. I came to my first north-south ditch. Here was the first and only time my map deceived me. According to my map, Jericho Ditch was the first of two small canals that I would cross enroute to the north-south Dismal Swamp Canal. Jericho Ditch is four and a half miles from the place I started my 109° compass direction. Actually the ditch I hit at 3:30 is one which lies half-way between my starting point and Jericho Ditch and obviously was made some time after my map was produced. This misconception of the number of canals I must cross, and consequently how far along on my route I was, let me in for a rude shock later on in my trip.

I was delighted to see what I thought was Jericho Ditch. I had been traveling only two hours on "route 109" and already I had covered four and a half miles! Portsmouth Ditch, up ahead, was only six and three quarter miles from my starting point: hence, very soon I would be more than half-way across Dismal Swamp.

I swam, or rather waded, across the limb-choked, stagnant, tea-brown water of "Canal X." I banged the high grass on the other bank with my canoe paddle before I pulled myself out of the water. (Goodness knows what I would have done if a water mocassin *had* fled in my direction. . . .) Since it was already close to 4:00 o'clock, and since an explorer first class readies his teepee two hours before sundown, I decided to bivouac for the night. I swung my hammock, pitched my poncho rain shelter, and hung my mosquito net. A small but efficient version of what I know as a deerfly, in formidable numbers worked on me as I made camp.

At 8:00 p.m. Tuesday night I lay down in my hammock for my first night in Dismal Swamp. I had on my complete change of clothes, and I lay on and drew over me a piece of longitudinally folded cloth that served as under-sheet and blanket. My scimiter-sharp machete and my flashlight lay convenient to my hand in a fold formed between hammock and mosquito net in the skirt of the mosquito net, so I physically prepared for the threats of the night.

Around 11:00 p.m. I was wakened from fitful sleep by the rustling of saplings, each rustling a breath apart from the next one. A deer? A bear? No, it was something larger, much larger. Was it to be vouchsafed to me that here in the fastnesses of Dismal Swamp there existed a monster, perhaps a monster like the giant ape-man that had been seen in northern California? At 11:00 p.m. on July 19 I was not psychologically prepared for the revelation.

Nothing happened. Idiotically the rhythm of the sounds must have lulled me to sleep, because, when I momentarily closed my staring eyes to rest them, I opened them to the morning forest.

I was packed, canteens filled from Ditch X, and on my way by 8:00 a.m. I did not expect to spend another night in Dismal Swamp, but having grown somewhat cautious with middle age, I had taken off the dry clothes I had slept in and had put on the wet ones worn the day before.

I walked and walked, expecting every moment after the first hour to come upon the next ditch, Portsmouth Ditch (as I thought). The vegetation degenerated from large trees to bush, brier, small tree and smaller tree. I was forced to use my machete frequently to clear enough of a space to allow me to bull ahead a few yards before the greenbrier tacklers had me stopped again.

The problem of water became serious. When I work I perspire. When I work hard I sweat. I was sweating then. I had already drunk the contents of one canteen and was fighting to keep myself away from the other. I found and cut several lengths of grapevine, but obtained not more than a mouthful of water from each length. Actually the effort spent in finding and cutting the grape vines took as much water as I got from them, so the gain was nothing. Then I noticed that the fallen leaves on the forest floor looked darker, damper in certain places than they did in others. With the blade end of my walking-stick paddle I began to dig. When the hole was about eight inches deep, I noticed that the mud was wetter mud. For the next few inches I dug with my hand. Soon my fingers were covered by two or three inches of water. Then the water rose in the hole, at least ten inches deep of it.

No sooner had I found, drunk and thoroughly enjoyed a large quantity of my water treasure than I came upon another of a different type. I saw a pool of brown water in the hole where an uprooted tree had stood. I sampled some of this but found it more tea-like in taste, probably due to the steeping of many leaves in it, and hence less to my fancy than my cold, pure, mud-water.

Finally, after checking my wrist compass against my military compass and then using the hour hand of my watch to get an approximate heading from the sun—and after seriously wondering if I had held my map upside down when I took my compass reading of 109°—I reached Ditch Number II.

I figured this to be Portsmouth Ditch. Actually, it was Jericho Ditch. The hour was 4:00 p.m. July 20. I had fought my way for eight hours since crossing the first ditch the previous afternoon and I had covered a puny two and a half or three miles; thus, at the end of the second day, I was less than half the distance across Dismal Swamp.

(Continued on page 21)

*The Art of Seamanship – Part One:*

# Man's Ability to Cope with the Sea

By FORREST R. BRAUER, *Training Officer*
*Flotilla 51, U. S. Coast Guard Auxiliary*

Illustrations courtesy The National Safe Boating Association

THE art of seamanship has been aptly defined as man's ability to cope with the sea. You can learn to cope with the sea only when you know how to handle your boat, its equipment and yourself not only under the most pleasant conditions but also under those extremely adverse conditions when emergencies may arise.

The essence of good seamanship is putting into practice that knowledge which you gain through experience in handling your boat as well as observation of others. Many of us admire the skillfulness with which some watermen handle their boats. They probably have never read a single line of theory of boat handling but they have spent their lives on the water and their skill has come from years of practice. Those of us who must do our boating on weekends, holidays and vacations can also gain skill in boat handling through practice, experience and study. While we also learn through our errors, we wish to reduce them to the minimum.

Most of us who own and operate pleasure boats want to be good skippers and, in order to do this, we must know ourselves, our abilities and also our limitations. While we can enjoy our sport and have just as much fun as our guests, a good skipper must also discipline himself and exercise self control.

A good skipper should have foresightedness. He should be prepared for all kinds of emergencies mentally as well as having the proper equipment and knowing how to use it. He should have several solutions to such emergencies and be ready to meet sudden dangerous situations. Eternal vigilance is the price of safety. Always keep a sharp lookout both inside and outside of your boat.

As a skipper you also have definite responsibilities. Your first responsibility is the safety of your boat. The safety of your crew and guests will then be a natural consequence. While none of your friends may be skilled boatmen, it's a good idea to size up their abilities before a cruise for help in an emergency. It's also good to have someone on board who can take over if you become ill or injured.

A good skipper also observes courtesy in operating his boat in such a manner as to not cause others discomfort. Give all craft a wide berth—especially those fishing, at anchor, sailboats and oystermen tonging. The wake from your boat can cause damage or injury to others for which you not only are responsible but liable for other penalties as well.

A good skipper should know his boat. All boats react differently and he should know why his boat acts as it does. He should know what to expect of her in heavy weather. The only way he will know this is to experience it. He should know how his boat reacts in a head sea, a quartering sea and a following sea and at various speeds in these seas. Only after experiencing his boat's action in these seas can he have confidence in his boat as well as himself in handling her under adverse conditions.

For a boat to react properly it must be trimmed correctly and have adequate freeboard. Trim is the horizontal angle at which a boat rides. With an inboard, trim is controlled by properly distributing gear or weight to make the boat ride on her proper water line. With an outboard, it is distributing gear and passengers to achieve the same result.

While outboard cruisers may be safe in protected waters, it is this writer's opinion that they are dangerous in open seas in rough water. They are usually a scaled down version of an inboard. While an inboard has its engine at the lowest point amidship, the outboard cruiser mounts its single or twin motors on the stern. This heavy weight, together with gas tanks close by and batteries, concentrates its gear on the stern. If two or more men stand on the stern with this fixed weight the stern has no buoyancy, is definitely overloaded and invites seas to come tumbling into the cockpit.

Two men lost their lives when their 18-foot outboard cruiser with twin motors turned over this spring. Their bodies were found off of Fisherman's Island and the boat, floating upside down, had drifted off of Virginia Beach. One motor was missing and the other almost wrenched loose. While some manufacturers and dealers will not like this publicity, the writer is selling safety, not boats.

Outboard owners should be careful to mount their motors on the stern of their boat perpendicular to the line of thrust at full throttle. To tilt it either forward or back from a perpendicular position will cause the bow to dig in or the bow to ride too high. Either can be dangerous.

In boat handling, especially when winds or currents are strong, keep always to the leeward side of any shoal or obstruction. Then, should your engine stop you have plenty of time and sea room to drop anchor until repairs are made or help arrives.

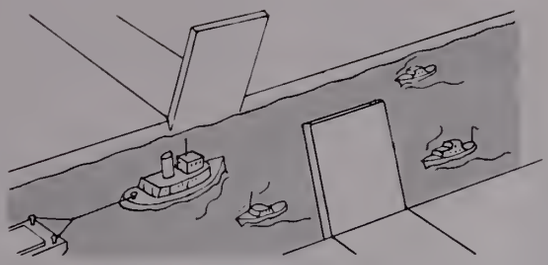
Small boats should keep clear of barges and large boats. They have a dangerous wake when under way. When a barge is anchored, never cross in front of it. The current

Stay clear of moored barges. Extremely strong currents flow under them.

doesn't flow around it, but an extremely strong current flows under it and a small boat can be caught by this current and trapped under the barge.

When attempting to run through a narrow and shallow channel an alert skipper can tell immediately when he gets into too shallow water. The stern settles, the RPM's drop and speed drops. Also a stern wave will build up on the shallow side.

Whenever approaching a bridge or a dock, entering a slip, or maneuvering close to other boats or obstructions, keep your RPM's at about 600 to 700. With any lower speed the engine can cut out at a critical moment and you may do



Proceed with caution at open bridges, but keep your engine at 600 to 700 RPM's to avoid stalling

serious damage to your own boat or some other boat or property. When in close quarters, as noted above, always give way to another boat going with the wind or current, whichever may be the strongest.

A skipper should also take advantage of the unequal thrust of his propeller blade in maneuvering his boat. Practically all marine inboard engines tend to turn the bow to port and the stern to starboard. When in reverse the stern tends to turn to port. Therefore, such a boat will turn in a smaller radius to port, and, whenever conditions permit, a dock should be approached from the port side. With an automobile engine converted to marine use, the opposite would be true. The bow would tend to turn to starboard and the stern to port.

In making preparations to get under way, the first thing a skipper should do is lift the hatches and check for gas fumes. Be certain of this procedure. Never be too hasty to make this check for gas fumes. It's also good to do it after the boat has been in heavy weather. Check to see that fuel tanks are full. Then turn the key on and see if the ammeter registers discharge. If so, engage the starter. After the engine starts check the oil pressure, temperature, ammeter (charging) and see that the water is circulating. Water will, of course, discharge through the exhaust when the engine reaches the proper temperature.

For most boats the most economical speed is just beyond the point where the boat starts to plane. Cruising speed should be about two-thirds to three-quarters full throttle. Any additional speed is obtained at a considerable increase in costs.

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## I Hiked Across Dismal Swamp (Continued from page 19)

However, I *thought* I had only four and a half miles to go. With steam up anew I plunged into the battle on the other side of smelly Jericho Ditch.

At 5:30 p.m., in the middle of a blackberry-vine jungle, I ran out of enthusiasm, and hence of energy. Tiredly I pitched camp. I had no appetite for food and did not cook any. Wearily I crawled into my hammock as soon as my camp was readied.

I was awakened the second night at approximately 11 p.m., too. It was not a monster this time. (I would have spat in the monster's eye Wednesday night.) It was a hard rain. Water! The area I was in, and had been in for the last hour, was particularly dry. I had only one canteen of water, my mud-water, and there was no telling how good would be my chances of finding water the next day. Values being relative, I poured out my mud-water with alacrity and put that canteen and my other equipment capable of catching water under the larger trickles beginning to form off the roof.

As suddenly as the rain started, it stopped. I went around and collected all my little catchings, and I scooped up the bit that was imprisoned in a fold of the poncho-roof. I had made a bad bargain; for a pint of water I had swapped a quart. Feeling a bit forlorn, I crept into bed again and slept until the sun wakened me.

I was packed and ready to go an hour later, 7:00 a.m., July 21. I still was not hungry but managed to down a small pack of raisins.

Suddenly I heard to the east (slightly to my left) the sound of a gasoline motor. It seemed to be not more than half a mile away. I concluded that someone was revving up a small outboard motor on the Dismal Swamp Canal. So my wilderness sojourn was almost over! What a conversation piece this would make! "You know"—a pause while I dawdled over the relish of it—"I spent my second night in that darn swamp a few steps away from civilization!"

With flagging vigor restored yet again, I bounded off in the bush on good old 109°. A half hour later along with the sound of the motor I heard the boom of an explosion. As I walked, I noticed with apprehension that the booms were becoming increasingly louder. I finally stopped and reappraised the situation. I concluded that the sounds I was hearing were involved in some land clearing operation, perhaps logging. My "outboard motor," apparently, was running a saw. So my Dismal Swamp Canal was not a few steps away. . . .

With heavy heart and dragging energy I took up a compass heading of about 140°. This would take me southeast, well away from the demolition work; I would pick up 109° in a couple of hours.

At 8:30 a.m., I noticed a blaze on a tree that stood in my line of stumbling. I saw other blazes along a rough trail that led off to the south. I followed the trail for a few yards and noticed that the briers had been cut and the worst of the bushes and sapling had been removed.

Again a time for decision. If I followed the trail to the south, I would have surcease, at least for a while, from my labors with the machete; I would be spared the ducking under and the worming through the stuff that I had to negotiate without cutting; and if the trail went far enough, I would hit the Feeder Ditch which led straight and true from the east end of Lake Drummond to the Dismal Swamp Canal.

Decision made, I strode off to the south along the trail. My feet were noticeably sore now, but my elevated spirits lent, if not wings to my feet, at least a tail feather or two. I remember I burst into song, or what serves me as song.

One hour later I got the shock of my middle-aged life. Down the trail to the south I had been noticing light through the trees, horizon high, for quite a while. This light, I assumed, must come from the clearing on the banks of the Feeder Ditch. It did not come from the Feeder Ditch; with my heart failing I realized that the brightness through the trees was Lake Drummond.

It could not be Lake Drummond! Had I not crossed Portsmouth Ditch yesterday afternoon? And had I not put miles between me and Portsmouth Ditch? No matter how I reasoned it away, it *was* Lake Drummond.

I might have quit at this point under other circumstances. I am not sure. The realization in this case that I had nowhere to quit and no one to quit to made my choice simple. My only recourse was to skirt the lake to the east until I ran into the Feeder Ditch. This I set out to do.

The going was rough around the lake, yet at least I had an alternate choice of passage. I could wade along shore. Wading had its difficulties because fallen limbs and frequently whole trees lay perpendicular to the shore, concealed in the dark water.

An hour after I left Portsmouth Ditch I hit the Feeder Ditch. I was delighted to see it but disappointed to find that a fearsome tangle of blackberry and greenbrier vines had taken over the obviously once-cleared north bank. I was forced to eschew the bank and walk parallel to it in ankle-deep mud.

I was passing through a high blackberry tangle and had stopped partly out of fatigue and partly to breakfast on some unusually large and luscious blackberries when I happened to lift my eyes and glance ahead. There, very clearly discernable through intervening leaves, was a large house and green lawn surrounded by an imposing eight foot-fence. The tidiness and the "civilizedness" of it was startling.

I passed through a gate in the fence and crossed the lawn in front of the house. I called "Ho! Anyone home?" to identify myself as human, there being so much mud and whisker on me that a short-sighted resident might shoot me for a bear.

There was no one at home. However, I heard the pleasant sound of an outboard motor coming up the ditch from the direction of the Dismal Swamp Canal. I hailed the occupant and he stopped his boat. In answer, to my questions, he told me that I had three miles to go and that the rest of the way was "not bad walking."

Despite my tiredness I made the three miles to Dismal Swamp Canal in one hour.

I stood, thigh deep in brambles, overlooking the confluence of the Feeder Ditch and the Dismal Swamp Canal, and paused a moment. Before me across the canal was Arbuckle Landing; behind me was the near-trackless swamp. I felt as I stood on the vertical bank high above the water like Columbus must have felt standing on his poop deck as he approached Spain after his first voyage: the swelling pride of a man coming home in glory.

There was not much glory in what happened subsequently. Heavily-clothed and pack on back I slid down the ten-foot bank into Dismal Swamp Canal and swam the 20 yards across the canal. It is reasonably safe to say that I am the only man who came out of Dismal Swamp and swam, fully dressed, Dismal Swamp Canal on July 21 at 2:00 p.m., yet nobody but me acclaimed it. The Arbuckle Landing store, just across Route 17 which parallels Dismal Swamp Canal, had a large sign advertising "COLD BEER"; there, since I noted telephone lines going into the store, I squished my way. I was brought up short by a little sign just over the knob stating "closed for today."

I took up my odyssey again, this time heading north on Route 17. I found a gas station. Here at 2:30 p.m., July 21, I made my phone call to my delighted wife. (There was some delay in her answering since she had to be wakened from exhausted sleep. She had been hexing snakes ever since Tuesday afternoon.)

When she drove up six hours later, she said, her eyes bright, "Did you see any snakes?"

"No."

"What! No snakes in Dismal Swamp?"

She could not believe that in two days and nights, aside from a few undernourished mosquitoes and deerflies, I had seen only two creatures: a small turtle and a baby toad!

## DR. SHOMON NAMED DIRECTOR OF AUDUBON NATURE CENTERS

Dr. Joseph J. Shomon, chief of the education division of the Virginia Commission of Game and Inland Fisheries and editor of *Virginia Wildlife* magazine for nearly 14 years, has accepted the directorship of the newly created Nature Centers Division of the National Audubon Society in New York.

The new department that Dr. Shomon will head was formed recently by the merger of the Nature Centers For Young America, Inc., and the long-established, conservation-minded National Audubon Society. The new organization has

Dr. Shomon

been established to promote and help establish conservation educational nature centers all across America, particularly where school and college groups and other interested groups can learn about nature, ecological and conservation principles in a natural environment in and adjoining cities. Another service the division will undertake is assistance with the preservation of open lands and natural areas.

Dr. Shomon has had long experience in wildlife conservation education work. He was born in Westford, Connecticut, October 16, 1914, and became trained in forestry and wildlife management early in his career. He studied forestry at the University of Idaho and is a graduate of the New York State Ranger School of the New York State College of Forestry and the School of Forestry and Conservation of the University of Michigan. From the latter he holds a bachelor's and master's degree in forestry and wildlife management.

During World War II Dr. Shomon served as company commander with the Army Graves Registration Service.

Before coming to Virginia, Dr. Shomon served as educational forester for the Tennessee Valley Authority. He also served for a period of time with the United States Department of Agriculture, Bureau of Entomology and Plant Quarantine. He joined the Commission of Game and Inland Fisheries on July 1, 1947, and became head of the education division and editor of *Virginia Wildlife* in February 1948.

In September 1956 Dr. Shomon took leave of absence from the Commission to work on his Ph.D. in conservation at the University of Michigan. He returned to Virginia in August 1957 and received his Ph.D. in June 1959.

*Bird of the Month:*

# The Scarlet Tanager

By DR. J. J. MURRAY

*Lexington, Virginia*

THE flash of bright color and the cheery song of the scarlet tanager seem to epitomize the spirit of spring in the woods. A walk at the end of April along a woodland stream in the Valley of Virginia will always turn up pleasant surprises. Redbud colors the edges of the forest; dogwood is at the point of promise; trilliums are in full bloom; bloodroot, past its prime, still shows some blossoms. Early butterflies are out, black and white swallowtails, dark skippers, and little blues, as well as the earlier mourning cloaks and sulphurs. The hillsides are veiled with misty green. The faithful birds that have stayed with us through the bleak mountain winter are singing their thanks for spring. The first returning migrants have joined them. Now, with a flame of burning red, a bird lands on a high branch, first calling a harsh 'chick-turr,' and then breaking out into a spirited song. It is a scarlet tanager, one of the first and most beautiful of our summer visitors.

No one can mistake this bird. His close relative, the summer tanager, might in spite of the difference in his red and the lack of a crest be mistaken for a cardinal, but there is nothing like a male scarlet tanager. The whole head and body are a brilliant scarlet, with sharply contrasting black wings and tail. As the bird molts in July it takes on an oddly mottled red, yellow, and black plumage, but in early summer it is clear and vivid. The female, as befits her need to go unnoticed on the nest, is a quiet olive-green, tinged with yellow and somewhat darker on the wings and tail. Oddly enough, although in the males the red of the scarlet tanager is deeper than that of the summer tanager, in the females the summer tanager, with a suffusion of orange in her underparts, is the brighter.

During the migration period the scarlet tanager may be found anywhere in Virginia, although it is rare along the coast, but in summer its distribution is strange indeed. In the Valley the line between the breeding ranges of the two tanagers is rather sharply defined, the scarlet ordinarily being found only above 1500 feet and the summer only below that line. However, it is common at much lower elevations around Washington, in the upper Piedmont, and at places along the fall line. It seems as a breeding bird to miss most of the lower Piedmont, as well as the coastal areas.

The scarlet tanager is a bird of the woods. It prefers somewhat open stretches. Here can be heard its lovely song, a warble like the robin's song but without the robin's monotonous quality, usually much sweeter but with the occasional intrusion of a strident quality. In the mountains three songs may confuse the learning listener: the dull warble of the robin; the sweet, bright warble of the rose-breasted grosbeak; and the somewhat intermediate but brisker warble of the scarlet tanager.

The nest is set well out on a large horizontal limb where there are small branches for support, 12 or 15 feet from the ground. It is shallow and not very tightly built, made of weeds and rootlets and lined with softer material. The three or four eggs resemble those of the cardinal, pale bluish with brown or dull reddish markings. They are laid from late May in eastern Virginia to mid-June in the mountains.

The first sight of a scarlet tanager in spring is a memorable event, but any day is brightened by such a vision.

Commission Photo by Harrison

Wally Evans who lives at 1411 Laburnum Avenue, Richmond, is a member of the Virginia Herpetological Society. He helped Troop 715 with its reptile exhibit at a recent Scout-o-rama.

### Snaking For Scouts

"Snake boy" Wally Evans, age 15, and his 15 live snakes were just a small part of the Boy Scout-o-rama held at the State Fairgrounds in Richmond in May. but he attracted a lot of attention.

Two of Wally's snakes were poisonous. One was the western diamondback rattlesnake, the other a copperhead caught right on the State Fairgrounds in April.

Wally is a freshman at Richmond's John Marshall High School.

### Waltonians Deliver Gun Safety Books to Norfolk

Norfolk school children will be benefitting for many years from the efforts of the Norfolk Chapter of the Izaak Walton League.

Gun safety committee members headed by Mickey Freedman delivered 10,000 booklets on gun safety to the Norfolk school system this spring.

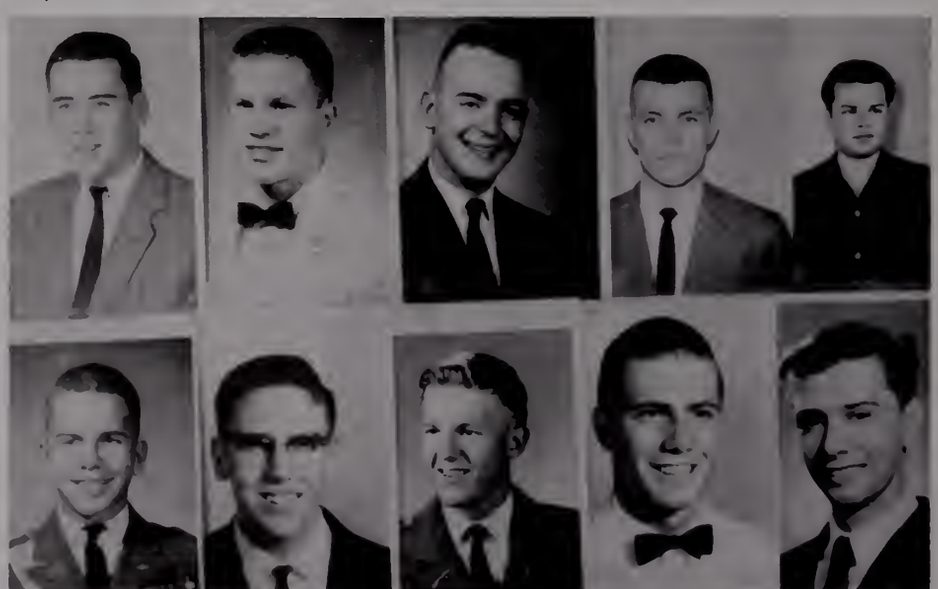
Other committee members were Stu Hume, Walter Boyd, B. D. Mechor, Jr., Steve Oliver and Tom Hudgins.

### Rain Hike

Why don't you try an exciting hike during a hard rain? But don't go when there is lightning or thunder. The whole world around you changes during such a downpour. Frogs, turtles and other animals will leave creeks and ponds to scamper hither and yonder.

Earthworms and other small creatures will come to the ground surface as their burrows fill with water. Sometimes a busy robin will be there waiting for a feast or to gather lunch for its babies. Other birds may be desperately trying to stay dry by perching close to a large tree trunk. You can be sure that the ducks will be making the most of everything.

Make a mental note of the animals and their behavior that you observe during such a walk. Compare this list with one prepared as you cover the same ground on a clear day. How do you account for any differences? Can you find other things to compare on the two hikes?—*New Horizons*



These young men have been named by the Virginia State Rifle and Revolver Association to its All-State Rifle Teams, according to Dr. Richard L. Russell of Newport News. Top row (Collegiate Team), from left to right: William I. K. Hamilton, V.P.I. junior from Warrenton; Robert C. Sinclair, V.P.I. junior from Hampton; James S. Drake, III, V.P.I. junior from Norfolk; Robert E. Watkins, U. of Richmond junior from Richmond; Robert J. Booker, V.P.I. junior from Clarence Center, N. Y. Bottom row (Scholastic Team), from left to right: Archibald P. Hudgins, II, Fishburne Military School senior from Charleston, W. Va.; John W. Courtney, III, West Point H. S. senior from West Point; Earl E. Lofland, Jr., Fishburne Military School senior from Wilmington, Del.; Richard E. Levy, Colonial Heights School senior from Colonial Heights; James M. Williams, Colonial Heights School junior from Colonial Heights. Each will receive a silver medal from the Association.

### Hunting Regulation Changes Listed

The rabbit and grouse seasons will be uniform statewide and the elk season will be closed, but other hunting seasons in the Old Dominion next fall will be much the same as last year's.

(If a county was not included in the Commission's regulation changes, its hunting regulations next fall will be the same as those in effect last season.)

Changes officially adopted by the Game Commission on April 28 include:

Setting the open season on quail, rabbit and grouse, statewide, for the third Monday in November through January 31, except in the counties of Bland, Buchanan, Carroll, Dickenson, Giles, Grayson, Lee, Pulaski, Russell, Scott, Smyth, Tazewell, Washington, Wise and Wythe where the season on quail will close on December 31.

Providing an open season on turkeys in Craig and Loudoun counties during the general season from the third Monday in November to January 15.

Providing the following hunting seasons for raccoon: East of the Blue Ridge mountains (except Bedford County) from October 1 to March 10 with no bag limit; west of the Blue Ridge mountains and Bedford County from October 15 to January 31 (except in the counties of Augusta, Bath, Clarke, Frederick, Highland, Page, Rockbridge, Rockingham, Shenandoah and Warren where the season shall be from October 15 to February 28) with the bag limit two a day; and rescinding the season limit of 12 raccoons per season in the national forests.

Making it unlawful to hunt elk at any time.

Including squirrel and bear in the bow and arrow season from October 15 to November 1.

Providing an early squirrel season in Rappahannock County October 1-15.

Providing a continuous open season for hunting foxes with gun and for trapping in Augusta County.

Deer hunting regulation changes include:

Reducing the bag limit for Culpeper, Greene and Madison counties to one a season, either sex, instead of last year's limit of 2 a season, one of which may be a doe in Culpeper and 2 a season, bucks only, in Greene and Madison.

Liberalizing the Fluvanna County limit to 2 a season, one of which may be a doe during the first 3 days, from last year's limit of 2 bucks, and proposing just the opposite change for Henrico County, substituting the "2 bucks only" limit for a hunter's choice season there.

Giving Prince George County a bag limit of 2 a season, 1 of which may be a doe during the last 5 days.

Commission Photo by Harrison

Howard W. Reisinger of Tappahannock is shown with the long-billed curlew mount which he donated to the Game Commission museum in Richmond on May 8. Reisinger collected the bird while hunting in Denmark in 1959.

Opening Henry County to deer hunting under "west of the Blue Ridge" regulations (6 days, no dogs) with a one-buck bag limit.

Providing a 2-buck limit for western Nansemond County and a "2 season, 1 of which may be a doe during the first 3-days" limit for eastern Nansemond County.

Making it unlawful to use dogs for the hunting of bear, foxes and bobcats during the open deer season in that section of Amherst County west of Rte. 29 and in that section of Nelson County west of Rte. 151.

These trapping seasons were adopted:

"It shall be lawful to trap beaver, mink, muskrat, opossum, otter and raccoon, statewide, from December 1 to March 10, with the following exceptions in regard to raccoon:

"(a) In the counties of Accomack, Charles City, Gloucester, James City, Mathews, New Kent, Northampton, Princess Anne and York and the cities of Hampton and Newport News, it shall be lawful to trap raccoon from October 1 to January 31.

"(b) It shall be unlawful to trap raccoon at any time in the counties of Alleghany, Bath, Bedford, Bland, Botetourt, Buchanan, Carroll, Craig, Dickenson, Floyd, Franklin, Giles, Grayson, Henry, Lee, Montgomery, Patrick, Pittsylvania, Pulaski, Roanoke, Rockbridge, Russell, Scott, Smyth, Tazewell, Washington, Wise and Wythe."

### Spring Gobbler Kill Totals 34

A total of 34 turkey gobblers were harvested on the three areas opened to gobbler hunting during the experimental season this spring in Virginia. The reported kill on Camp Pickett was 24 gobblers. Five gobblers were harvested on both Camp A. P. Hill and the Commission-owned Gathright Wildlife Area.

### NRA Program Adopted By Game Commission

The Virginia Game Commission approved a National Rifle Association hunter safety program cooperative agreement at its April 28 meeting in Richmond.

Under the terms of this agreement, the NRA will instruct and certify Commission personnel who will, in turn, train and certify local NRA instructors. The NRA will help provide basic course literature, supplies and training-shooting ranges. They will also be a clearing house and a source of information regarding hunter safety training.

The Commission agreed to be a distribution center and to use all possible publicity channels to inform the general public in the state about the program.

### Clerk-Typist Joins Boat Section

Mrs. J. C. Wells, clerk-typist, was employed as the latest addition to the State Game Commission's Fiscal Division on May 8. She will work primarily in the boat section to help with boat registration record-keeping.

Mrs. Wells is a 1959 graduate of Franklin High School in Harrells, N. C. She and her husband live on East Laburnum Avenue in Richmond.

### Atlantic Waterfowl Council Makes Resolutions

Representatives of the game agencies of 17 eastern states attending the annual meeting of the Atlantic Waterfowl Council at Old Point Comfort, Virginia, in May requested that the U. S. Fish and Wildlife Service separate the dove and duck baiting regulations into separate laws and that states not permitting Sunday hunting be allowed to add compensatory days to their waterfowl seasons.

The two-day meeting of game commission directors and game technicians from 17 states also resulted in the submission of several resolutions, one of which opposed the use of Currituck Sound, Pamlico Sound and Mattamuskeet National Wildlife Refuge as bomb-target areas by the U. S. Air Force.

### Federal Aid Totals Given

A preliminary apportionment of $12,850,000 of Federal Aid funds are being made available July 1 for State fish and wildlife projects, Secretary of the Interior Udall has announced. The balance of Federal Aid fish and wildlife restoration program funds for the year ending June 30, 1962, will be apportioned in October. The comparable preliminary apportionment in 1960 was $12,800,000.

Under the Federal fish and wildlife restoration programs, States spend their own funds on approved projects and are then reimbursed up to 75 percent of the cost.

Federal Aid funds are derived from an excise tax on sporting arms and ammunition and on sporting rods, reels, creels, and artificial lures. Distribution of the two funds is made on formulas based upon the number of paid license holders in a State and on its area, as prescribed by law. Both Federal Aid Acts are administered by the Bureau of Sport Fisheries and Wildlife.

Of the $12,850,000, a total of $9,850,000 is for the restoration of wildlife and $3,000,000 for the restoration of fish. No indication was given relative to the possible total apportionment, but in the last five years wildlife restoration funds have amounted to between 14 and 15.5 million dollars and fish restoration funds have been approximately $5,000,000.00. Last year fish restoration funds amounted to $5,836,000.00.

Funds which became available to Virginia and neighboring states July 1, 1961, are as follows:

| | FISH | WILDLIFE |
|---|---|---|
| Maryland | 29,700.00 | 65,108.92 |
| New Jersey | 29,700.00 | 65,431.92 |
| North Carolina | 53,029.29 | 204,379.97 |
| Ohio | 84,336.56 | 274,891.19 |
| South Carolina | 31,686.70 | 100,030.90 |
| Tennessee | 69,884.89 | 199,123.86 |
| Virginia | 44,198.64 | 190,993.60 |
| West Virginia | 29,700.00 | 107,124.03 |

Roanoke World-News Photo

Clarence C. (Duke) Maberry of Roanoke County became Virginia's champion largemouth bass fisherman in mid-April when he caught this 15-pound, 3-ounce lunker on eight-pound test line in Philpott Reservoir. Maberry was bumping bottom with a Hi-Sport Fancy tail lure when the record bass hit. It was 26 inches long.

### Outlook Bleak for Duck Crop

Serious drought conditions on the best duck nesting areas on the Canadian prairies threaten to sharply curtail waterfowl production again this year.

The first report on waterfowl breeding ground conditions shows there is serious drought on the grasslands and a fair portion of the parklands of Alberta, Saskatchewan and Manitoba, the Fish and Wildlife Service said. The same condition extends into the nesting areas of the Dakotas in the U. S.

Tom Critchelow of Richmond was one of 34 fortunate hunters to bring home a turkey during the experimental gobblers-only season this past April in Virginia. His was bagged on Camp Pickett.

### Game Manager Burned Out

The Goldbond home of veteran game manager Lon F. Oliver and his wife Osha was destroyed by what appeared to be a deliberately set fire on May 15.

The F.B.I., investigating because the home was U. S. Forest Service property, is reported to have some leads to the identity of the arsonists.

Oliver, 70, retired from the State Game Commission on July 1 after 14 years of service as game manager on the Jefferson National Forest. Game Biologist Supervisor John H. McLaughlin of Roanoke made arrangements for the Olivers to stay in a nearby patrol cabin through June 30.

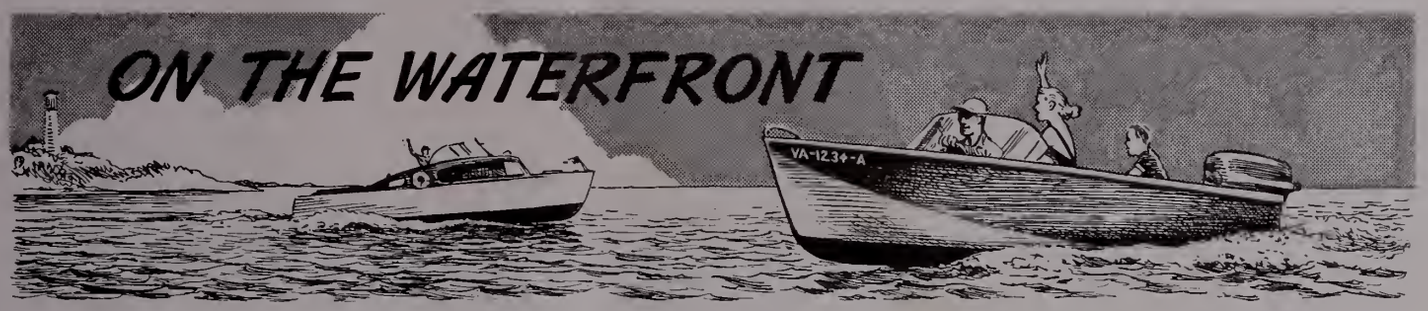
The fine deer herd in the Stony Creek area is probably the result of Lon Oliver's personal interest in the success of the deer restoration project, Game Division Chief Richard H. Cross, Jr., has said.

### Harrison Attends AACI Meeting in South Dakota

Game Commission Assistant Information Officer George H. Harrison represented Virginia at the 1961 Conference of the American Association for Conservation Information at Sylvan Lake, South Dakota May 31-June 3. Harrison presented a paper on "Conservation Education in Virginia." At this meeting, the Commission's easel-type digest display rack was awarded third place among nontechnical bulletins in the awards competition.

### Forest Service Names New Wildlife Assistant

Ralph R. Hill has been named assistant chief, division of wildlife management, U. S. Forest Service, with headquarters in Washington, D.C., the Wildlife Management Institute reports. Formerly chief of the branch of wildlife management in the Service's Rocky Mountain Regional Office in Denver, Hill will be an assistant to Lloyd W. Swift, head of wildlife management on the national forests.




### National Safe Boating Week, 1961

### A PROCLAMATION BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

WHEREAS increasing numbers of our citizens are participating in boating for health and relaxation; and

WHEREAS this increase in recreational boating has greatly increased the use of our waterways and has intensified the need for close adherence to accepted safe-boating practices to prevent needless loss of life and damage to property; and

WHEREAS continued cooperation among persons and organizations interested in boating is necessary to maintain our steady progress towards the ultimate goal of courteous and safe boating throughout the year; and

WHEREAS, in recognition of the importance of safe-boating practices, the Congress, by a joint resolution approved June 4, 1958 (72 Stat. 179), has requested the President to proclaim annually the week that includes July 4 as National Safe Boating Week:

NOW, THEREFORE, I, JOHN F. KENNEDY, President of the United States of America, do hereby designate the week beginning July 2, 1961, as National Safe Boating Week; and I urge all persons and organizations interested in recreational boating, and the boating industry, Government agencies. and other groups, to observe National Safe Boating Week.

I also invite the Governors of the States, the Commonwealth of Puerto Rico, and other areas subject to the jurisdiction of the United States to join in this observance in an effort to make this year the safest in the history of recreational boating.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Seal of the United States of America to be affixed.

JOHN F. KENNEDY

By the President.

### Storms Dangerous For Small Boats

The sight of a squall line sweeping toward you over the water is a thrilling sight, but you shouldn't let it make you forget to turn tail and head for shore if you're in a small boat.

Since small craft are the first to be signaled to shore in the event of stormy

Head for shore if you see a squall line sweeping toward you.

waters, become familiar with the warnings and heed them immediately.

Head for the closest safe anchorage or landing whenever a storm threatens.

Try to tie your boat to the downwind side of the dock. This will allow the wind or current to move the boat away from the dock and eliminate possible damage from bumping.

If you do get trapped on the water by a sudden squall, point your bow into (against) the wind. Reduce your speed or take in sail at once.

When you can't make headway against a strong sea. trail a sea anchor from the bow to keep your boat headed into the waves. A bucket will do the job in an emergency.

### The "Citizen's Band Radio"

There has been a current rush to outfit pleasure boats with the new Citizen's Band radio sets. They are relatively inexpensive. easy to install, simple to license and offer an easy means for "social and business communications." However, Auxiliarists (and other boaters) who have decided to buy a radio for their boat should make a careful comparison between the standard radiotelephone and the Citizen's Band sets.

For safety and distress communications, there are several limitations to the Citizen's Band. The Coast Guard does not monitor the band and therefore cannot be called upon for assistance. Current Federal Communications Commission regulations prohibit Citizen's Band stations from communicating with U. S. Government stations except for Civil Defense purposes. There are no normal provisions or means for the broadcast of emergent weather and marine information. The frequency and required low power operation of the sets limits the range to not more than 20 miles, under ordinary circumstances.

Of the many frequencies available to the Citizen's Band (26.96 through 27.23 megacycles). none have been designated for distress traffic. Also, no portion of the band is reserved for marine use only. During periods of normal operation no protection from interference which may be caused by the operation of other authorized stations can be afforded for the communications of any station in this service, even when involving the protection of life or property.

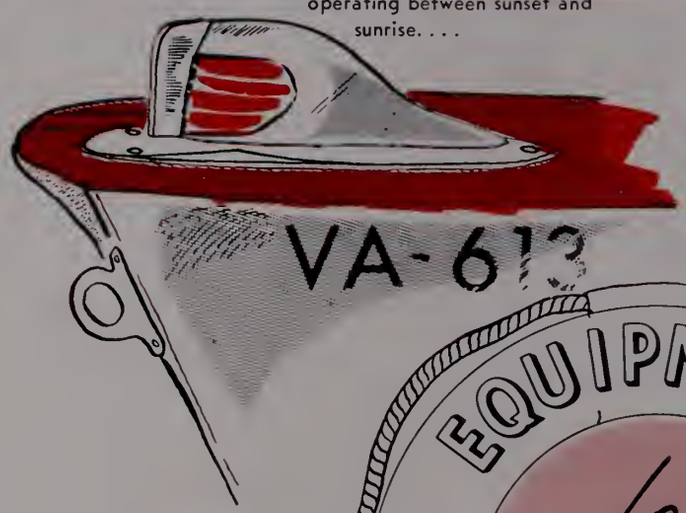
It appears then that the Citizen's Radio Service may fail to provide for two basic communications needs of pleasure boatmen; namely, safety and distress, and navigational information. It can be adopted to meet limited operational requirements of yacht clubs.

Auxiliary National Headquarters supports the concept of the Citizen's Radio Service for what it is and for what the FCC intended it to be: a device for personal and business use. It is not considered as a replacement or an additional maritime mobile radiotelephony safety system in view of its inadequacies. As an addition to presently accepted 2 megacycle radiotelephony equipment, it does help relieve the congestion now known to exist on 2182 kilocycles.

It is understood that as far as Coast Guard potential involvement is concerned, there is no present intention by the agency to guard or monitor Citizen's Radio Service frequencies, since the characteristics preclude reasonable reliance upon it as adequate for distress communication purposes.—*Under the Blue Ensign*

# EQUIPMENT for Safe BOATING

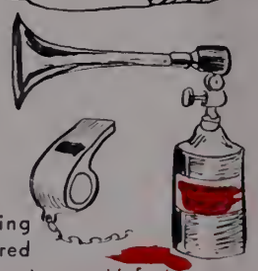
A combination BOW LANTE
to port and green to starbo
on motorboats under 1
operating between sunset and
sunrise. . . .



stern light
around the
horizon (32
points of the
compass) is re-
quired under the
same conditions.

The law requires a U. S.
Coast Guard Approved
life saving device aboard
for each occupant.

If the motorboat has an
enclosed fuel tank or is
over 26 feet long, a fire
extinguisher is required by
law.



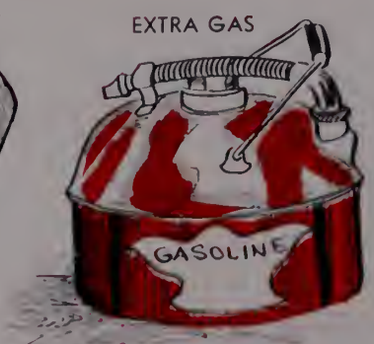
A sound-making
device is required
aboard motorboats over 16 feet.

The items above are
required under Vir-
ginia's Boating Safe-
ty Act. The items
below are strongly
recommended.

The safe skipper also
has aboard . . .

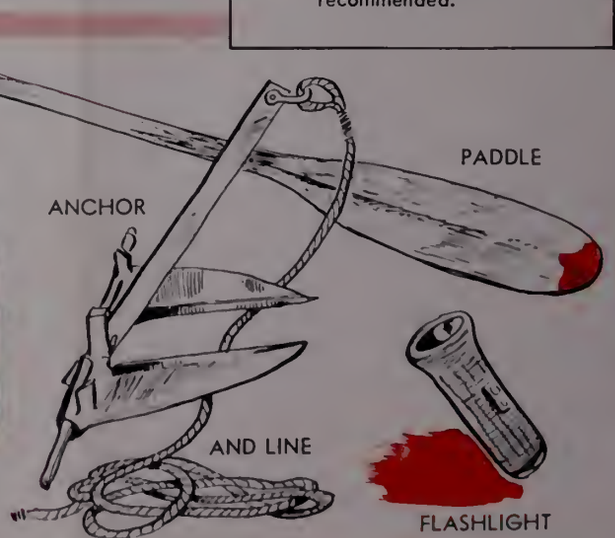
FIRST AID KIT

EXTRA GAS




ANCHOR

PADDLE



AND LINE



FLASHLIGHT